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DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT

PACIFIC COMMONS PROJECT
CATELLUS DEVELOPMENT CORP.

City of Fremont, California

STATE CLEARINGHOUSE # 8721715 & 96052016

GENERAL PLAN AMENDMENT AND
PLANNED DISTRICT AMENDMENT

DUNCAN & JONES
Urban & Environmental Planning Consultants

LAMPHIER & ASSOCIATES
Urban Planning - Environmental Analysis

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City of Fremont, California

January 31, 2000

Prepared by

DUNCAN & JONES
Urban & Environmental Planning Consultants

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This **Supplemental Environmental Impact Report** was prepared by **Duncan & Jones**, Berkeley, California, and **Lamphier & Associates**, Oakland, California. The Consultants have devoted their best efforts to preparing a comprehensive information document that identifies and evaluates the possible environmental impacts of the proposed Project, and the possible measures which could be taken to mitigate adverse impacts.

This report is intended to be a full disclosure document and is provided solely to assist in the evaluation of the proposed Project. The Consultants shall not be liable for costs or damages of any client or third parties caused by the use of this document for any other purposes, for such costs or damages of any client or third parties caused by delay or termination of any project due to judicial or administrative action, whether or not such action is based on the form or content of this report or any portion thereof prepared by the Consultants.

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EXECUTIVE SUMMARY

This report, together with its appendices, constitutes a third Draft Supplemental Environmental Impact Report ("SEIR") for the Pacific Commons Project, first identified in 1987 as the Sante Fe Pacific Realty Project General Plan Amendment. The most recent previous Supplemental EIR for the Project was certified as adequate and complete in September, 1996, and the Pacific Commons Project was subsequently approved by the City of Fremont. (See 1996 SEIR, EIR #86-85, SCH #8721715 & 96052016; General Plan Amendment, GPA-95-4, Resolution No. 9049; Planning District Zoning Ordinance, P-95-10, Ordinance No. 2198, Vesting Tentative Tract Map 6861; and Development Agreement, DA-95-2, Ordinance No. 2197, collectively "Project Approvals"). This SEIR evaluates the environmental impacts associated with the new request submitted to the City of Fremont for approval of an amendment to the General Plan and the Planned District zoning (and all other associated City approvals) on approximately 768 acres of land located in Fremont, California in order to implement the mitigation measures and conditions of approval contained in the City's 1996 Project Approvals.[1] The Project Applicant is Catellus Development Corporation (formerly the Santa Fe Realty Corporation).

Sections 15162 and 15163 of the CEQA Guidelines require that a supplemental EIR be prepared where there are "substantial changes" in the project or in the circumstances which are "due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effect," but where only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation. A supplemental EIR augments a previously certified EIR only to the extent necessary to address substantial changes which are proposed in the project, to address substantial changes which have occurred with respect to the circumstances under which the project would be undertaken, and to address new information of substantial importance (which was not known when the previous EIR was certified). Here, modifications to the Pacific Commons Project (analyzed in the previously certified 1996 SEIR [EIR #86-85, SCH #8721715 & 96052016] and subsequently approved by the City in 1996) are mandated by the need to incorporate and implement the required mitigation measures and conditions of approval, including the Mitigation Plan approved by the City of Fremont in 1998 and the permit conditions to reduce Project-related wetlands and special status species impacts imposed in 1999 by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the California Department of Fish and Game (collectively, "Resource Agencies"). Incorporation of these mitigation measures and permit conditions into the revised development plan may result in new significant environmental effects, and analysis of those effects require minor changes to the 1996 SEIR. The Project approvals of these Resource Agencies are incorporated by reference into this Supplemental EIR.

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1 The Pacific Commons Project site as a whole include a gross area of 877 acres, as noted in the 1996 Supplemental EIR. Because that acreage includes approximately 41 acres of the Auto Mall area and another approximately 68 acres of development that has been approved and built, the Project for the purposes of this Supplemental EIR includes 768 acres.

When compared with the previously-approved Pacific Commons Project, the implementation of these mitigation measures would result in a reduction in the development footprint (with a corresponding increase in the development density within the reduced footprint), a substantial increase in the size of the on-site preserve areas, and the elevation of Cushing Parkway. More specifically, modifications of the Project as previously approved to implement these measures include:

- Reducing the developable area from approximately 601 acres to about 305 acres for the construction of approximately 7,100,000 square feet of floor area in the business park[2];

- Setting aside 49 acres on-site for development of a City park, a detention/retention basin to manage storm water flows and water quality from the adjoining business park and streets, and a portion of which would incorporate a transit facility/train station);

- Preserving 391 acres on-site for restoration of a habitat that would be contiguous with (and ultimately donated to) the adjoining Don Edwards San Francisco Bay National Wildlife Refuge (subsequently referred to as "National Wildlife Refuge");

- Restoring and donating to the Refuge a 53-acre portion of the nearby Stevenson Parcel and 20-acre Onorato Parcel for wetlands and special status species preservation (This donation and restoration project is not evaluated as part of the Supplemental EIR for two reasons. First, wildlife conservation is categorically exempt from the provisions of CEQA. Second, approval of construction activities on this land is not the responsibility of the City of Fremont.);

- Restoring and donating an 840-acre off-site easement for California tiger salamander habitat preservation in accordance with the Department of Fish and Game existing approvals (not evaluated as part of the Supplemental EIR);

- Filling and realigning a portion of the N-1 Alameda County flood control channel for preserve area restoration and storm water drainage purposes; and

- Completing the Cushing Parkway extension across the Project site (including an elevated roadway design across the preserve area, and a segment of the Bay Trail).

Prior to certification of the1996 Supplemental EIR (EIR #86-85, SCH #8721715 & 96052016), the Pacific Commons Project had been the subject of the following CEQA documents, all of which are incorporated into this document by reference:

- Final SEIR (July 26, 1996) (EIR #86-85, SCH #8721715 & 96052016);

- Draft SEIR (February 16, 1996) (EIR #86-85, SCH #8721715);

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[2] Note that the Pacific Commons Project as a whole includes 8,300,000 square feet of business park, but since 1996, 1,200,000 square feet have already been developed with the appropriate approvals.

- Addendum & Special Study Application, 90-6 (August 12, 1991) (SCH #8721715);
- Final SEIR (February 24, 1989) (EIR #86-85, SCH #8721715);
- Draft SEIR (December 12, 1988) (EIR #86-85, SCH #8721715);
- Final EIR (January 22, 1988) (EIR #86-85, SCH #8721715); and
- Draft EIR (November 24, 1987) (EIR #86-85, SCH #8721715).

Copies of the documents cited above are available for review at the City of Fremont Development & Environmental Services Counter at 39550 Liberty Street, Fremont, California, 94538.

This document focuses primarily on those significant Project-related environmental effects which, as a result of modifications to the Project description since the 1996 Supplemental EIR was certified, may differ from those environmental effects previously identified. The primary issues addressed in this Supplemental EIR are related to Project-related traffic and circulation effects, changes in the existing visual character of the site resulting from Project development, Project-related effects on the provision of fire protection, police and emergency services, and the effects associated with the development of a proposed recreational facility at the Project site. Other Project-related environmental effects which have been addressed in earlier environmental review documents (e.g., Project-related effects associated with air quality, water supply, wastewater collection and treatment system, schools, public utilities hazardous materials, geotechnical hazards, etc.) would generally be of a magnitude similar to (or less than) that identified in previous documents which have been incorporated by reference, and the implementation of the previously identified Mitigation Measures associated with these effects would continue to reduce them to a level of less than significant (although in the case of geotechnical and air quality considerations, no mitigation has been identified which would reduce potential impacts hazards to a level of less than significant).

Although Mitigation Measures identified in this document are expressed in a mandatory form ("shall"), rather than in a less forceful manner ("should," "could," etc.), the decision to require each and every mitigation measure as a condition of approval resides with the Planning Commission and City Council, and these bodies can choose to delete or amend any mitigation measure as they see fit. In approving the Project where the EIR (or in this case, SEIR), identifies one or more significant environmental effects, CEQA requires the City to make written Findings for each such effect (CEQA Guidelines, Section 15091[a]). In this case, if the City approves the proposed amendments, a set of findings based on the previous Supplemental EIR and on this Supplemental EIR will have to be adopted by the City Council. Also, in the case of air quality, traffic and seismic impacts, some impacts cannot be reduced to a level of less than significant, and will require adoption of a Statement of Overriding Considerations.

The Appendices include the Notice of Preparation (NOP) and responses to the NOP (Appendix A), the permits issued by the Resource Agencies related to the future development of the Project site and the maintenance of the Preserve Area (Appendix B) and the Final Updated Traffic Study

of the Proposed Pacific Commons Project, prepared by TJKM (Appendix C). An air quality analysis was conducted with more current data. The conclusion of that analysis was not significantly different from the conclusion reached in the 1996 Supplemental EIR. No additional significant Project-related impacts were identified, and no additional mitigation measures were identified as a result of this updated analysis. A discussion of the updated air quality analysis for the Project as currently proposed is presented as Appendix D.

During the process of identifying a mutually acceptable means of meeting the objectives both of the Project proponents and of the regulatory agencies tasked with the protection of wetlands and habitats (primarily the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the California Department of Fish and Game), eleven (11) on-site alternatives to the Project, sixteen (16) off-site alternatives to the Project, six (6) alternative alignments for Cushing Parkway, and one No-Project alternative were considered. Agreement was reached on the configuration of the Project site as currently proposed, followed by the issuance of all appropriate permits related to the protection of wetlands and habitat in October, 1999. Those interested in reviewing the initial analysis of these alternatives are directed to the Technical Appendix.

In the "Summary of Significant Impacts and Mitigation Measures" which follows, each and every individual Impact identified in the body of the Draft SEIR is presented along with the applicable Mitigation Measure(s) in the numerical sequence in which they are addressed in the full text.

SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Traffic and Circulation

Impact 4-1: The I-880 SB Off-Ramp/Auto Mall Parkway intersection is projected to operate at LOS E (V/C = 0.92) in the AM peak period and above mid-point LOS D (V/C = 0.89) in the PM peak period, a *potentially significant* Project-related environmental impact. This impact was identified in the 1999 Supplemental EIR.

Mitigation 4-1: I-880 SB Off-Ramp/Auto Mall Parkway: Additional improvements beyond the expected improvements are not feasible. **The Project-related impact to this intersection is an unavoidable significant environmental impact.** This Project-related impact was also identified in the 1996 Supplemental EIR.

Impact 4-2: The Cherry/Boyce/Stevenson intersection is projected to operate above mid-point LOS D (V/C = 0.88) in the AM peak period, a *potentially significant* Project-related environmental impact. This impact was identified in the 1996 Supplemental EIR.

Mitigation 4-2: Cherry/Boyce Stevenson: Although no lane additions are needed for this intersection, the intersection will eventually need to be signalized. The level of service and the intersection operations would be significantly improved if the westbound approach were restriped for two left-turn lanes, one through lane, and one right-turn lane. This would reduce the potentially significant impact at this intersection to a level of *less than significant*.

Impact 4-3: The Grimmer/Auto Mall Parkway intersection is projected to operate at LOS E during the AM and PM peak periods, a *potentially significant* Project-related environmental impact. This impact was identified in the 1996 Supplemental EIR.

Mitigation 4-3: Grimmer/Auto Mall Parkway: This intersection has been constructed to its maximum practical capacity. **The Project-related impact to this intersection is an unavoidable significant environmental impact.** This Project-related impact was also identified in the 1996 Supplemental EIR.

Impact 4-4: The Fremont/Auto Mall Parkway intersection is projected to operate above mid-range LOS D in both the AM period (V/C = 0.87) and PM period (V/C = 0.90), a *potentially significant* Project-related environmental impact. This impact was not identified in the 1996 Supplemental EIR.

Mitigation 4-4: Fremont/Auto Mall Parkway: The following lane patterns are required at this intersection: Northbound - two left-turn lanes, two through lanes and one right-turn lane; Southbound - two left-turn lanes, two through lanes

and one right-turn lane; Westbound - two left-turn lanes, two through lanes and one shared through and right-turn lane; Eastbound - two left-turn lanes, three through lanes and one right-turn lane. These improvements would allow the intersection to operate at a high LOS D (V/C = 0.90. Although this V/C ratio would be higher than the desired target V/C of 0.85 (mid-range LOS D), it would appear to be acceptable under the City of Fremont's General Plan, which recognizes that this target may not be achievable in the Industrial Planning Area. These improvements would reduce the Project-related impact at this intersection to a level of *less than significant*.

Impact 4-5: The Osgood/Auto Mall Parkway intersection is projected to operate at LOS F during the AM and PM peak periods, a *potentially significant* Project-related environmental impact. This impact was not identified in the 1996 Supplemental EIR.

Mitigation 4-5: Osgood/Auto Mall Parkway: The following lane patterns are required at this intersection: Northbound - one left-turn lane, three through lanes and one right-turn lane; Southbound - two left-turn lanes, two through lanes and one shared through plus right-turn lane; Eastbound - two left-turn lanes, two through lanes and one shared through plus right-turn lane; Westbound - two left-turn lanes, one through lane and one shared through plus right-turn lane. With these lane patterns, the intersection would be expected to operate at LOS E, which is consistent with the findings of overriding considerations associated with the adoption of the Fremont General Plan.

Impact 4-6: I-880 SB between Stevenson and Auto Mall Parkway. In the AM peak period, the proposed Project would cause the volume to capacity ratio to be increased from 1.05 to 1.12, which is a 6.6 percent increase. This would represent a *significant* Project-related environmental impact. This impact was identified in the 1996 Supplemental EIR.

Mitigation 4-6: I-880 SB between Stevenson and Auto Mall Parkway. The City shall require the Project developer to implement a Transportation Demand management program to promote trip reduction measures and alternative modes of commute to mitigate impacts to southbound I-880 between Stevenson and Auto Mall Parkway during the AM peak period. However, because it is not possible to assure that the necessary level of trip reduction will be achieved to reduce impacts to a level of less than significant, impacts to southbound I-880 between Stevenson and Auto Mall Parkway during the AM peak period are considered **unavoidable significant impacts**. This Project-related impact was also identified in the 1996 Supplemental EIR.

Impact 4-7: I-680 SB between Washington and Auto Mall Parkway. In the AM peak period, the proposed Project would cause the volume to capacity ratio to be increased from 0.99 to 1.01. Although this is only a two percent increase, it would be considered a *significant* impact because the level of service would elevate from LOS E to LOS F. This impact was identified in the 1996 Supplemental EIR.

Mitigation 4-7: I-680 SB between Washington and Auto Mall Parkway. The City shall require the Project developer to implement a Transportation Demand management program to promote trip reduction measures and alternative modes of commute to mitigate impacts to southbound I-680 between Washington and Auto Mall Parkway during the AM peak period. However, because it is not possible to assure that the necessary level of trip reduction will be achieved to reduce impacts to a level of less than significant, impacts to southbound I-680 between Washington and Auto Mall Parkway during the AM peak period are considered **unavoidable significant impacts**. This Project-related impact was also identified in the 1996 Supplemental EIR.

Impact 4-8: The proposed Project would be expected to increase the demand for transit in a location that is not currently served by commuter rail or other transit service. This is considered a *potentially significant* Project-related environmental impact.

Mitigation 4-8: The Project developer shall assist AC Transit or other providers with the extension of transit service to the Project site and the future train station at Auto Mall Parkway. Purchasing transit passes in bulk for distribution as a component of a TDM program is one means of assisting AC Transit with a system expansion. Transit service to the Project site should be provided on 30 minute headways or on headways consistent with CMP transit performance standards and AC Transit service standards. Transit service to the Project site should include linkage with BART. The location of transit stops shall be coordinated with AC Transit and the City of Fremont as additional information concerning the location of buildings becomes known. The transit stops shall be clearly marked with route and schedule information. The level of transit assistance to be provided by the Project developer shall be specified in the TDM program which is adopted for the Project. The Project site includes land for a future train station at the westerly terminus of Auto Mall Parkway. The Project developer shall cooperate with the City in its efforts to obtain rail transportation provider approval of a train station at the Auto Mall Parkway location. Adequate support for public transit operations would reduce this Project-related impact to a level of *less than significant*.

Impact 6-1: It is expected that a fence would separate the Preserve area from the proposed foot and bike trail at the Project site. Human or pet (or pet litter) intrusion into the Preserve Area could impact the habitat. Proper design of the landscaping, lighting and fencing associated with the perimeter trail should minimize land use conflicts, although such conflicts between development and Preserve Area uses could represent a *potentially significant* Project-related impact.

Mitigation 6-1A: Either prohibit dogs along the perimeter trail adjacent to the Preserve Area or require dogs to be leashed. If dogs are not prohibited along the perimeter trail adjacent to the Preserve Area, then dog walkers shall be responsible for disposing of dog litter.

Mitigation 6-1B: Request comments on trail design, landscaping, lighting and Preserve Area fencing from National Wildlife Refuge staff before final approval.

Taken together, these two mitigation measures should reduce potential conflicts between uses in the developed portion of the Project site and the Preserve Area to a level of *less than significant*.

Impact 6-2: Development of the Project site as proposed would result in the modification of existing storm water drainage facilities. The N-1 line was designed and located to drain the entire Project area, including property along Christy Street not owned by the Project proponent. The 391-acre preserve area will not be served by the N-1 line. Relocation of the N-1 line would remove a barrier between the two preserve subareas and is regarded as an environmental benefit. Final design of the relocated line must be coordinated with retention pond, city park and transit facility/train station design to avoid impact on those facilities.

Mitigation 6-2: Prior to any modifications to Line N-1, the Project developer shall design the relocated N-1 line to ensure the long-term maintenance and safety of the modified drainage channel, and the overall effects of the proposed filling/realignment on flood control within the watershed to the satisfaction of the Alameda County Flood Control and Water Conservation District (ACFCWCD) and the City of Fremont. All on-site drainage facilities must be designed to handle the runoff associated with the 15-year storm design as determined by ACFCWCD, and all drainage plans and calculations shall be submitted to the District for approval. The development of satisfactory drainage plans and the subsequent completion of the necessary on-site drainage improvements would reduce the potential impact to a level of *less than significant*.

I. INTRODUCTION

This report, together with its appendices, constitutes a third Draft Supplemental Environmental Impact Report ("SEIR") for the Pacific Commons Project, first identified in 1987 as the Sante Fe Pacific Realty Project General Plan Amendment. The most recent previous Supplemental EIR for the Project was certified as adequate and complete in September, 1996, and the Pacific Commons Project was subsequently approved by the City of Fremont. (See 1996 SEIR, EIR #86-85, SCH #8721715 & 96052016; General Plan Amendment, GPA-95-4, Resolution No. 9049; Planning District Zoning Ordinance, P-95-10, Ordinance No. 2198, Vesting Tentative Tract Map 6861; and Development Agreement, DA-95-2, Ordinance No. 2197, collectively "Project Approvals"). This SEIR evaluates the environmental impacts associated with the new request submitted to the City of Fremont for approval of an amendment to the General Plan and the Planned District zoning (and all other associated City approvals) on approximately 768 acres of land located in Fremont, California. These amendments are necessary in order to implement the mitigation measures and conditions of approval contained in the City's 1996 Project Approvals[1]. The Project Applicant is Catellus Development Corporation (formerly the Santa Fe Realty Corporation).

A. NATURE AND PURPOSE OF THE SUPPLEMENTAL EIR

For projects which have had an EIR prepared, the CEQA Guidelines require that a supplemental EIR be prepared where there are "substantial changes" in the project or in the circumstances which are "due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effect," but where only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation. A supplemental EIR augments a previously certified EIR only to the extent necessary to:

- address substantial changes which are proposed in the project;
- address substantial changes which have occurred with respect to the circumstances under which the project would be undertaken; and
- address new information of substantial importance (which was not known when the previous EIR was certified).

Here, modifications to the 1996 Pacific Commons Project are mandated by the need to incorporate and implement the recent approvals and required mitigation measures. Those approvals include the Mitigation Plan approved by the City of Fremont in 1998 and the permit conditions to reduce Project-related wetlands and special status species impacts imposed in 1999

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[1] The Pacific Commons Project site as a whole includes a gross area of 877 acres, as noted in the 1996 Supplemental EIR. Because that acreage includes approximately 41 acres of the Auto Mall area and another approximately 68 acres of development that has been approved and built, the Project for the purposes of this Supplemental EIR includes 768 acres.

by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the California Department of Fish and Game (collectively, "Resource Agencies"). Incorporation of these mitigation measures and permit conditions into the revised development plan may result in new significant environmental effects, and analysis of those effects require minor changes to the 1996 SEIR.

B. CONTENT OF THE SUPPLEMENTAL EIR

CEQA Guidelines section 15163 (b) specifies that a Supplemental EIR "need contain only the information necessary to make the previous EIR adequate for the project as revised." Accordingly, the analysis of topic areas in this SEIR is limited to a discussion of the new potentially significant adverse effects resulting from the revised configuration, reduced development footprint, and increased density of the development. For consistency, the format of this Supplemental EIR generally follows that of the previous CEQA documents associated with the Pacific Commons Project (all of which are incorporated by reference), including:

- Final SEIR (July 26, 1996) (EIR #86-85, SCH #8721715 & 96052016);
- Draft SEIR (February 16, 1996) (EIR #86-85, SCH #8721715);
- Addendum & Special Study Application, 90-6 (August 12, 1991) (SCH #8721715);
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- Draft SEIR (December12, 1988) (EIR #86-85, SCH #8721715);
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This document focuses primarily on those significant Project-related environmental effects which, as a result of modifications to the Project description since the 1996 Supplemental EIR was certified, may differ from those environmental effects previously identified. The primary issues addressed in this Supplemental EIR are related to Project-related traffic and circulation effects, changes in the existing visual character of the site resulting from Project development, Project-related effects on the provision of fire protection, police and emergency services, and the effects associated with the development of a proposed recreational facility at the Project site. Other Project-related environmental effects which have been addressed in earlier environmental review documents (e.g., Project-related effects associated with the air quality, water supply, wastewater collection and treatment system, schools, public utilities hazardous materials, geotechnical hazards, etc.) would generally be of a magnitude similar to (or less than) that identified in previous documents which have been incorporated by reference, and the implementation of the previously identified Mitigation Measures associated with these effects

would continue to reduce them to a level of less than significant (although in the case of geotechnical and air quality considerations, no mitigation has been identified which would reduce potential impacts to a level of less than significant).

Although Mitigation Measures identified in this document are expressed in a mandatory form ("shall"), rather than in a less forceful manner ("should," "could," etc.), the decision to require each and every mitigation measure as a condition of approval resides with the Planning Commission and City Council, and these bodies can choose to delete or amend any mitigation measure as they see fit. In approving the Project where the EIR (or in this case, SEIR), identifies one or more significant environmental effects, CEQA requires the City to make written Findings for each such effect (CEQA Guidelines, Section 15091[a]). In this case, if the City approves the proposed amendments, a set of findings based on the previous Supplemental EIR and on this Supplemental EIR will have to be adopted by the City Council. Also, in the case of air quality, traffic and seismic impacts, some impacts cannot be reduced to a level of less than significant, and will require adoption of a Statement of Overriding Considerations.

The Appendices include the Notice of Preparation (NOP) and responses to the NOP (Appendix A), the permits issued by the Resource Agencies related to the future development of the Project site and the maintenance of the Preserve Area (Appendix B) and the Final Updated Traffic Study of the Proposed Pacific Commons Project, prepared by TJKM (Appendix C). An air quality analysis was conducted with more current data. The conclusion of that analysis was not significantly different from the conclusion reached in the 1996 Supplemental EIR. No additional significant Project-related impacts were identified, and no additional mitigation measures were identified as a result of this updated analysis. A discussion of the updated air quality analysis for the Project as currently proposed is presented as Appendix D.

During the process of identifying a mutually acceptable means of meeting the objectives both of the Project proponents and of the regulatory agencies tasked with the protection of wetlands and habitats (primarily the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the California Department of Fish and Game), eleven (11) on-site alternatives to the Project, sixteen (16) off-site alternatives to the Project, six (6) alternative alignments for Cushing Parkway, and one No-Project alternative were considered. Agreement was reached on the configuration of the Project site as currently proposed, followed by the issuance of all appropriate permits related to the protection of wetlands and habitat in October, 1999 (the Project approvals of these Resource Agencies are incorporated by reference into this Supplemental EIR). Those interested in reviewing the initial analysis of these alternative are directed to the Technical Appendix.

C. SUPPLEMENTAL EIR REVIEW PROCESS

This Supplemental EIR addresses the requested General Plan Amendment and Planned District Amendment filed by the Project Applicant. Those Amendments require City of Fremont Planning Commission consideration and City Council approval in order to proceed. In accordance with State law, the City of Fremont must certify the Supplemental EIR as adequate and complete prior to taking any discretionary approval action on the Project.

During the public review period, interested individuals, organizations and agencies may offer their comments on the Supplemental EIR's evaluation of the Project's impacts. The comments received during this period will be compiled, and responses to these comments will be presented in a Response Document (Final Supplemental EIR). Together, the Draft Supplemental EIR and the Final Supplemental EIR will comprise the Supplemental EIR.

After review of the Draft Supplemental EIR and the Final Supplemental EIR, and following action to certify the Supplemental EIR as complete and adequate, the City of Fremont Planning Commission and City Council will be in a position to determine whether the Project should be approved as submitted, be subject to revision, or be rejected. This determination will be based upon information presented on the Project, its relationship to the City's policies, goals and regulations, its impacts and probable consequences, and the possible alternatives or mitigation measures available.

II. DESCRIPTION OF THE PROJECT

A. PROJECT LOCATION

The Pacific Commons Project site is located on approximately 768 acres within the City of Fremont in Alameda County, California (see **Figure 1**).[1] The Project site is bounded generally by the Nimitz Freeway (Interstate 880) to the east, Auto Mall Parkway to the north, the existing Cushing Parkway terminus to the south, and the Union Pacific Railroad right-of-way and the Don Edwards San Francisco Bay National Wildlife Refuge to the west (see **Figure 2**).

B. PROJECT SITE CONDITIONS

Historically, the Project site has been used for farming, duck clubs and grazing. The southeastern portion of the site has been used as a raceway and skysailing air strip, and the southwestern portion of the site contains electrical transmission lines and the Alameda County Flood Control District's N-1 Channel. Irrigation and drainage activities over the years resulted in modification of the topography, leaving mounds of soil and rubble, ditches, berms, and areas of pavement over the site. At some unknown period of time in the past, fill was added to portions of the site (primarily in the southwestern corner) for agriculture development purposes. Excavation of soil for development of the Auto Mall modified the topography to form a large, shallow area that seasonally fills with water (the "Oklahoma" pond, so named because of its shape). Previous activities have disturbed much of the site.

C. PROJECT HISTORY

In December, 1986, the Santa Fe Pacific Realty Corporation (now Catellus Development Corporation) applied for a General Plan Amendment, a Redevelopment Plan Amendment, and the rezoning of approximately 700 acres of the 877-acre Project site to allow for mixed use development. The environmental impacts associated with this proposal were evaluated in the Draft EIR dated November 24, 1987 and the Final EIR dated January 22, 1988.

After the Fremont Planning Commission denied the Project in February, 1988, the Project Applicant appealed the decision to the Fremont City Council, which denied the appeal but voted to appropriate funds for a Supplemental EIR to evaluate the environmental impacts associated with a modified proposal. This action was intended to facilitate the recommendation of the Planning Commission that a rezoning be approved to allow the development of an auto mall on a portion of the Project site.

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[1] While the 1996 Supplemental Environmental Impact Report stated that the gross acreage of the Project site was approximately 877 acres, it included the partially developed Auto Mall area (approximately 41 acres), and since that time, approximately 68 additional acres have been developed with warehouse-type structures with the appropriate approvals. The current area of the Project for which approvals are now sought excludes the Auto Mall and warehouse areas, and encompasses approximately 768 acres.

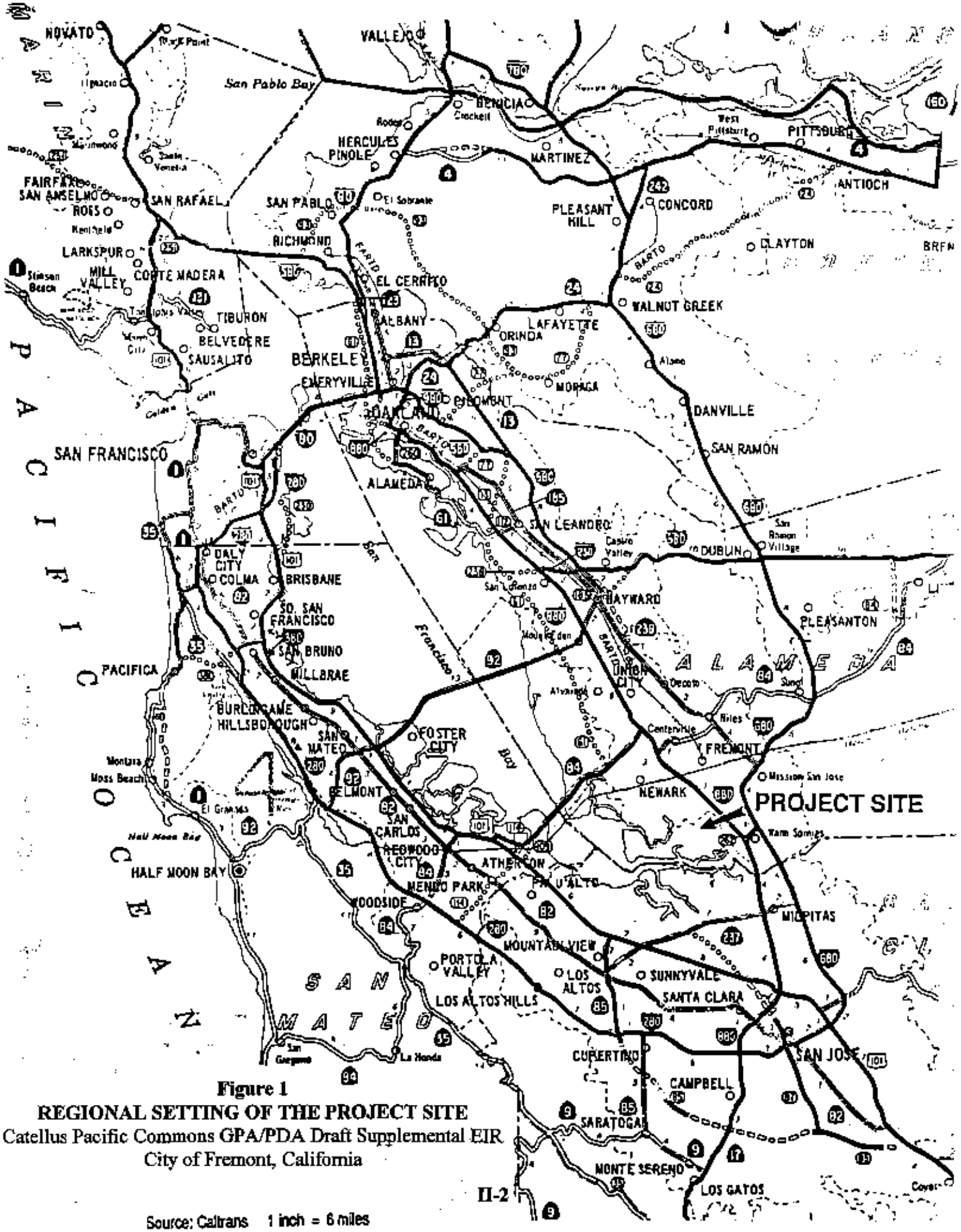
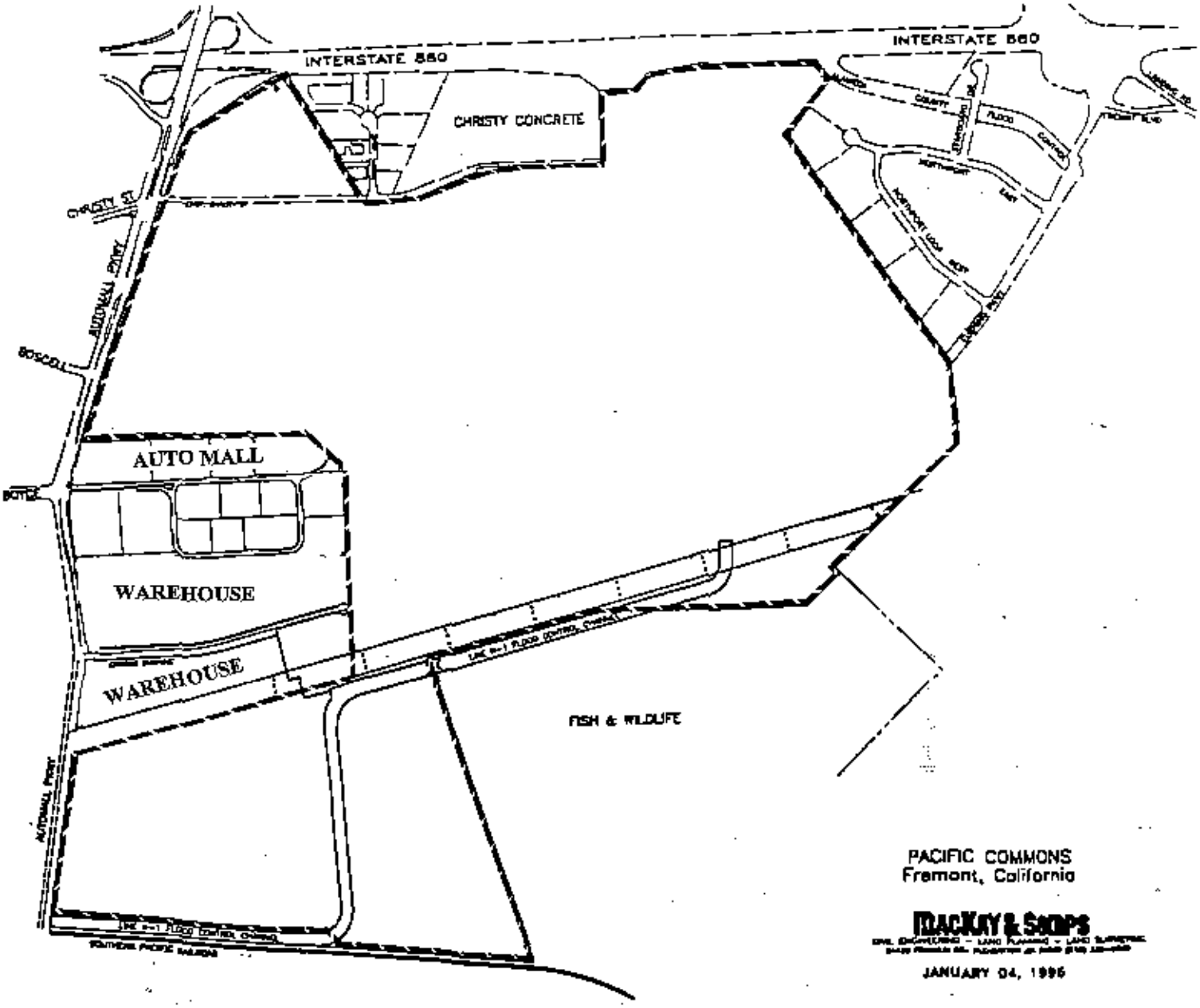


Figure 1
REGIONAL SETTING OF THE PROJECT SITE
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

Source: Caltrans 1 inch = 6 miles

Figure 2
BOUNDARIES OF THE PROJECT SITE
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California



Note: The Auto Mall and Warehouse areas were part of the original 877-acre site, but are not included within the boundaries of the 768-acre Project site evaluated in this Supplemental EIR.

In March, 1988, the Project Applicant substantially revised its proposal, which was subsequently analyzed as "Alternative 1" in a Draft Supplemental EIR. The Fremont City Council directed that this revised mixed use development proposal be placed on the November 1988 ballot as an advisory measure. In that election, 51 percent of voters expressed support for the revised mixed use project, and 49 percent were opposed to it. In March, 1989, the Fremont Planning Commission recommended that the Planned District P-88-15, which would allow for a mixed use development (including an auto mall, retail/commercial, hotel center, research and development office and warehousing uses) be approved, and that a Development Agreement for a mixed use project without residential elements (DA-88-1) be approved by the City Council. That April, the Fremont City Council adopted resolution 7577 amending the General Plan by redesignating the Project site Industrial and Commercial (GPA-88-18) and by making changes in the Circulation Element to service the Project site. The City Council also adopted Ordinance 1862, which rezoned the property from General Industrial (G-I), Restricted Industrial (I-R), Commercial Thoroughfare (C-T) and Flood Combining (F) districts to a Planned (P) district, adopted a preliminary and precise site plan for the P district (P-88-15), and adopted Ordinance 1863 approving the Development Agreement.

In September, 1990, the Project Applicant submitted a Special Study Application which proposed modifications of the approved development project which had previously been evaluated as "Alternative 2" ("All Industrial") in the first Supplemental EIR. The modified mixed-use development proposed at that time required a General Plan Amendment, a Redevelopment Plan Amendment, rezoning, a major amendment to the existing P district, a new Tentative Tract Map and an Amended and Restated Development Agreement. The proposed General Plan Amendment would permit mixed-use development at the Project site which would include restricted industrial uses, neighborhood commercial uses, residential uses, a hotel, an auto mall (which had already been approved), a fire station, a school/park, a park, a golf course/driving range, wetlands and open space. An Addendum to the EIR was certified, the new Development Agreement was approved, and the Fremont General Plan was amended to reflect the changes in land use designation which had been requested by the Project Applicant.

Early in 1995, the Project Applicant approached the City of Fremont with requests to amend the Development Agreement and to modify the General Plan to eliminate all residential designations and the golf course associated with them at the Project site, replacing them with commercial and industrial designations. This proposed modification to the General Plan and the Planned District rezoning would also eliminate the previously proposed elementary school at the Project site. The size of the Project site (as evaluated in previous environmental documents) was expanded by the addition of two adjacent parcels (the 126-acre Robbins parcel and the 65-acre Stem parcel), bringing the total size of the Project site to approximately 877 acres. This Project (identified as "Pacific Commons") was the subject of a second Supplemental EIR. In September, 1996, the City of Fremont certified this Supplemental EIR on the Pacific Commons Project and approved a General Plan Amendment, a Planning District zoning ordinance, a vesting tentative map, and a revised Development Agreement.[2] The 1996 Supplemental EIR and the Development

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[2] Prior to 1996, the Pacific Commons Project had been analyzed in the following CEQA documents: Final SEIR (July 26, 1996) (EIR #86-85, SCH #8721715 & 96052016); Draft SEIR (February 16, 1996) (EIR #86-85, SCH #8721715); Addendum & Special Study Application, 90-6 (August 12, 1991) (SCH

Agreement both included numerous mitigation measures and conditions of approval, including requirements to survey the Project site for special status plant and animal species, to develop an appropriate Mitigation Plan, and to obtain permits for wetlands and species impacts from the Resource Agencies.

In 1997, the City of Fremont joined Catellus Development Corporation as a co-applicant for the Resource Agencies' permits. In 1998, the City of Fremont approved the Mitigation Plan submitted by Catellus Development Corporation. The City of Fremont and Catellus Development Corporation received all Resource Agency permits in 1999.

D. PROJECT DESCRIPTION

The Project Applicant proposes to incorporate and implement the mitigation measures and conditions of approval (specifically, the Mitigation Plan and Resource Agencies' permit requirements) into the approved 1996 development plan for the Project site. The fundamental basis for the current Project is the mitigation plan resulting from negotiations between Catellus Development Corporation, the City of Fremont and the U.S. Fish and Wildlife Service, the Regional Water Quality Control Board, California Department of Fish and Game and the U.S. Army Corps of Engineers, collectively referred to as the Resource Agencies.

That mitigation plan comprising approximately 391 acres (referred to as the Preserve Area) of the site includes:

- Phased restoration of a native wetland ecosystem, including preservation and enhancement of existing wetland habitat occupied by vernal pool tadpole shrimp and Contra Costa goldfields;
- Creation of new wetland habitat to replace wetlands to be displaced by the development;
- Restoration of hydrologic and ecological connections between the proposed preservation area and the adjacent seasonal wetlands in an area of the San Francisco Bay National Wildlife Refuge, known as the Seasonal Wetland Unit of the Refuge;
- Self-sustaining wetland functions; and
- Restoration of a suitable upland habitat for burrowing owls.

A draft conceptual mitigation plan was approved by the Fremont City Council in 1998 and refined during negotiations with the resource Agencies during 1998 and 1999.

#8721715); Final SEIR (February 24, 1989) (EIR #86-85, SCH #8721715); Draft SEIR (December 12, 1988) (EIR #86-85, SCH #8721715); Final EIR (January 22, 1988) (EIR #86-85, SCH #8721715); Draft EIR (November 24, 1987) (EIR #86-85, SCH #8721715).

When compared with the previously-approved Pacific Commons Project, the implementation of these mitigation measures would result in a reduction in the development footprint (with a corresponding increase in the development density in the reduced footprint), a substantial increase in the size of the on-site preserve areas, and the elevation of Cushing Parkway. More specifically, modifications of the Project as previously approved to implement these measures include:

- Reducing the developable area from approximately 601 acres to about 305 acres for the construction of approximately 7,100,000 square feet of floor area in the business park[3];

- Setting aside 49 acres on-site for development of a City park, a detention/retention basin to manage storm water flows and water quality from the adjoining business park and streets, and a portion of which would incorporate a transit facility/train station);

- Preserving 391 acres on-site for restoration of a habitat that would be contiguous with (and ultimately donated to) the adjoining Don Edwards San Francisco Bay National Wildlife Refuge (subsequently referred to as "National Wildlife Refuge");

- Restoring and donating to the Refuge a 53-acre portion of the nearby Stevenson Parcel and 20-acre Onorato Parcel for wetlands and special status species preservation (This donation and restoration project is not evaluated as part of the Supplemental EIR for two reasons. First, wildlife conservation is categorically exempt from the provisions of CEQA. Second, approval of construction activities on this land is not the responsibility of the City of Fremont.);

- Restoring and donating an 840-acre off-site easement for California tiger salamander habitat preservation in accordance with the Department of Fish and Game existing approvals (not evaluated as part of the Supplemental EIR);

- Filling and realigning a portion of the N-1 Alameda County flood control channel for preserve area restoration and storm water drainage purposes; and

- Completing the Cushing Parkway extension across the Project site (including an elevated roadway design across the preserve area, and a segment of the Bay Trail).

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[3] Note that the Pacific Commons Project as a whole includes 8,300,000 square feet of business park, but since 1996, 1,200,000 square feet have already been developed with the appropriate approvals.

Figure 3 shows the Development Concept Plan for the Project site. Land use categories shown in this Figure include:

Land Use	Net Acres
Retail/Commercial	11.45
Office/R&D and Corporate Campus Overlay	215.62
Hotel/Conference Center	24.43
Parks & Open Space	45.12
Wetlands Preserve (excludes N-1 line)	387.78
Transit/Train Station	1.50

Figure 4 shows the Land Use Conceptual Plan as proposed and analyzed in the 1996 Supplemental EIR.

E. PROJECT PURPOSE

The Project's purpose is to implement the Mitigation Plan and Resource Agency permit conditions pertaining to wetlands and species preservation, restoration and enhancement, while maintaining the development-related objectives (including job creation, revenue generation, circulation, emergency vehicle response and park development) of the Pacific Commons Project as approved by the City of Fremont in September, 1996. Requirements to implement the Mitigation Plan should be incorporated into the Planned District Amendment and other appropriate City approvals to assure implementation of the Mitigation Plan.

Figure 3
DEVELOPMENT CONCEPT PLAN
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

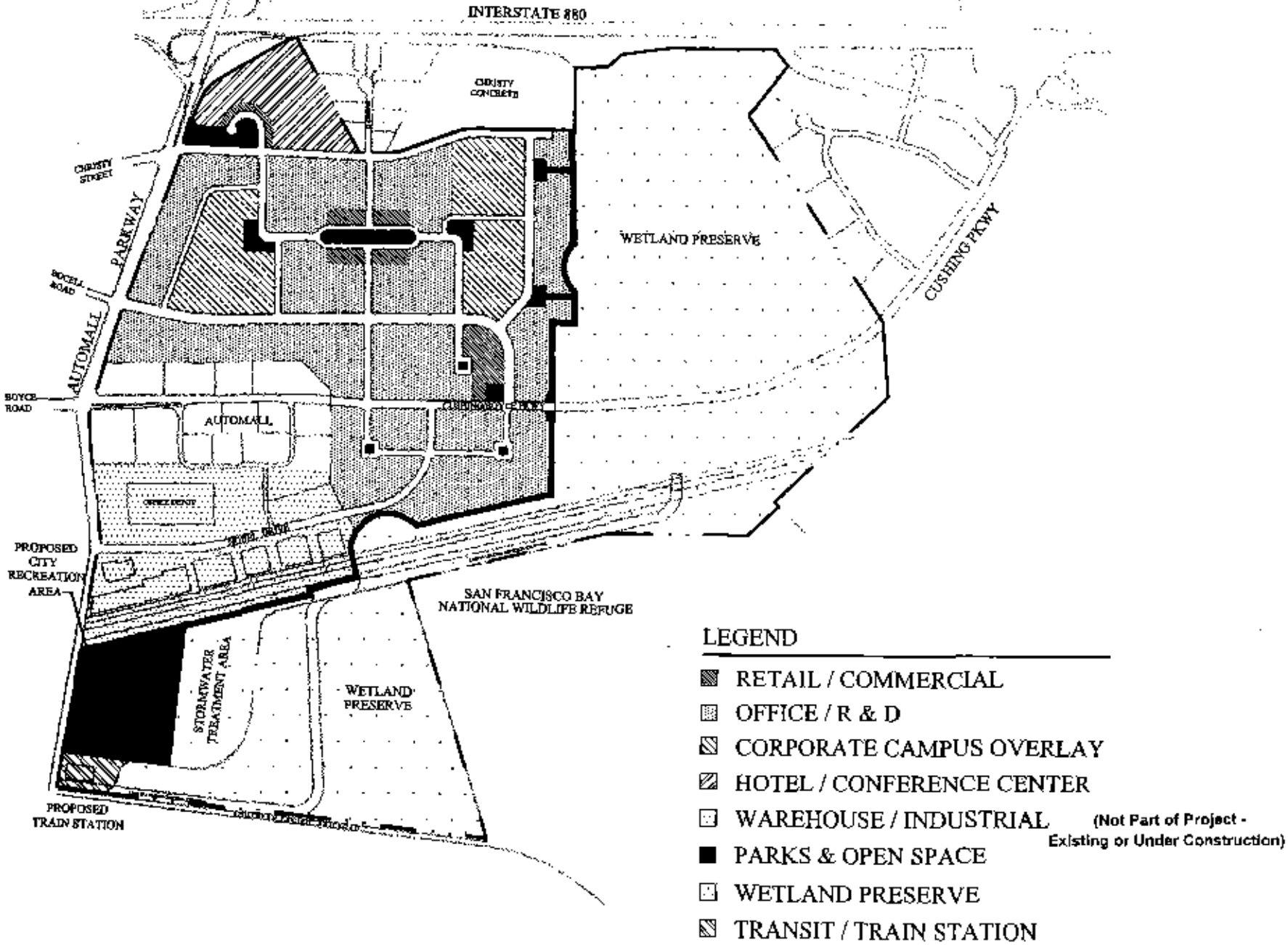
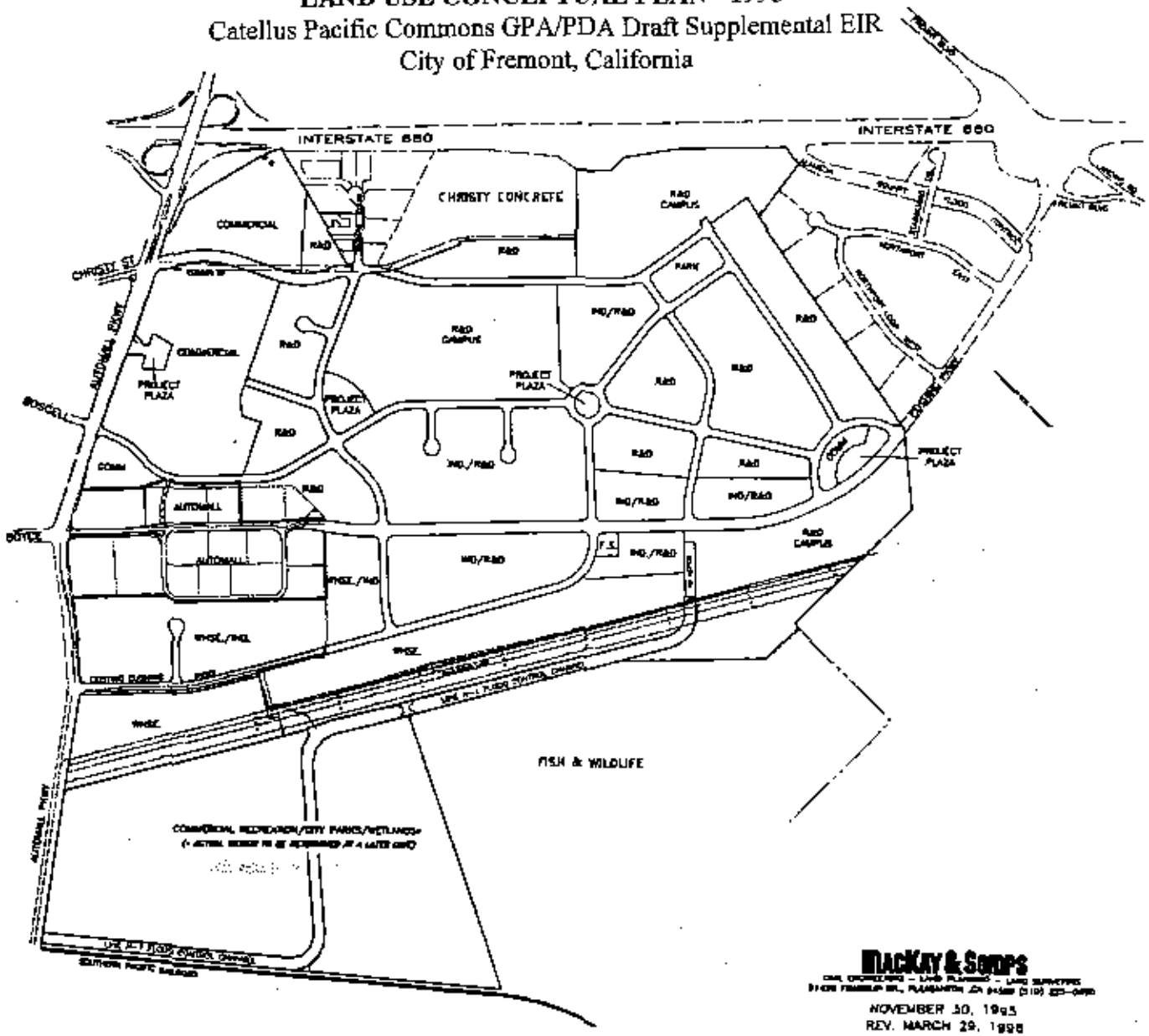


Figure 4
LAND USE CONCEPTUAL PLAN - 1996
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California



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III. PLANNING AND POLICY CONTEXT

A. SETTING

The Project site is located within the jurisdiction of the City of Fremont, and is subject to the land use designations and requirements of the Fremont General Plan and the Zoning Ordinance. The proposed project would require a General Plan Amendment and a major amendment of the existing Planned District (as well as other approvals, including vested tentative tract map, preliminary grading plan and development agreement). These actions would require the review and approval of the Fremont Planning Commission and/or the City Council.

Fremont General Plan

The Project site is located within Fremont's Industrial Planning Area. On the General Plan Map of the Industrial Planning Area (**Figure 5**), portions of the Project site are currently designated for Restricted Commercial-Industrial uses R C-I), General Commercial-Industrial uses (G C-I), High Volume Retail (HV) and Private/Public Open Space.

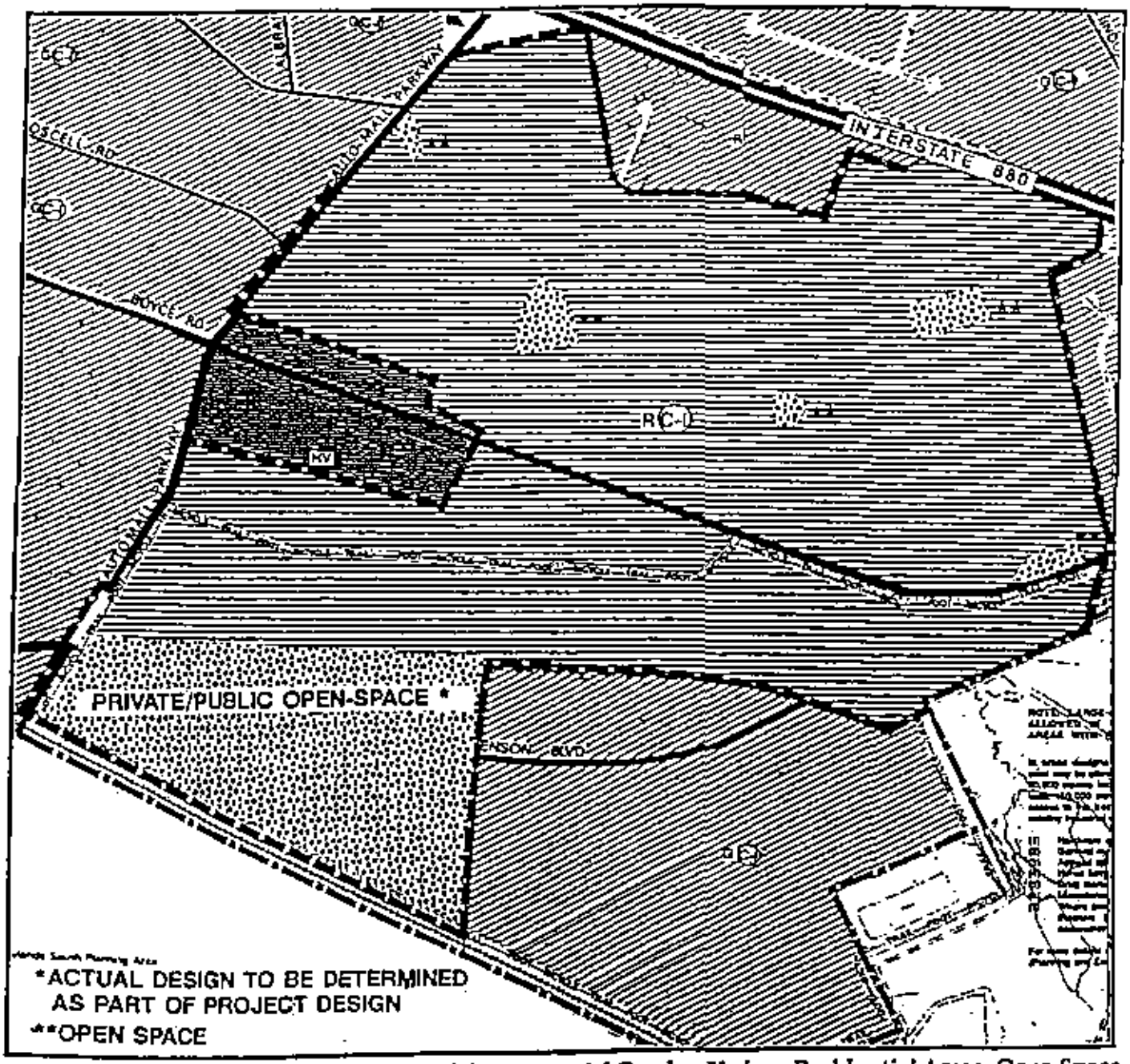
Although the General Plan conserves the majority of the designated industrial land for future industrial development, it also indicates that some of the land could be converted to "High Volume Commercial", and that some of the land (specifically, the "Fremont Shores Study Area," which includes a portion of the Project site) should be evaluated for possible conversion to other uses (Ref. 3, pages 3-20 and 3-21). The Auto Mall development area is designated as "High Volume Commercial" in the General Plan (Ref. 3 , LU Policy 2.33, page 3-52), and the City previously evaluated the possible conversion of a portion of the Project site to residential use (see Addendum & Special Study Application, 90-6 (August 12, 1991) (SCH #8721715)). The 1996 General Plan Amendment provided that the Project site be designated "Restricted Industrial", with a "Commercial/Industrial Overlay" and "Private/Public Open Space" (see **Figure 5**).

General Plan Policy LU 3.2 describes the type of development permitted in each land use category within industrial areas (Ref. 3, page 3-56). Allowable uses under the "Restricted Industrial" designation include research and development activities, manufacturing, warehousing and wholesaling. General Plan Policy LU 3.3 describes the type of commercial development permitted in these areas (Ref. 3, page 3-57). General Plan Policy LU 3.4 indicates that public and private recreational facilities may be allowed in an industrial area (Ref. 3, page 3-57).

General Plan Policy LU 3.6 (Ref. 3, page 3-58) indicates that the Floor Area Ratios (FAR) shown in Table 3-6 of the Plan are thresholds which shall be applied to all industrial projects, and that a higher FAR may be granted at the City's discretion based on one or more of the following criteria:

- Extraordinary benefits to the City;

Figure 5
GENERAL PLAN LAND USE DESIGNATIONS
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California



CURRENT LAND USE: Industrial Restricted-Commercial Overlay, Various Residential Areas, Open Space
RESOLUTION REQUEST: Industrial Restricted-Commercial Overlay, Private/Public Open-Space, Relocation of arterial and foot/bicycle trail.

AFFECTS THE LAND USE DIAGRAM FOR THE INDUSTRIAL PLANNING AREA

GPA-95-4
GENERAL PLAN LAND USE
DIAGRAM (SECTION)

- Unique circumstances of the project which would reduce its impacts in comparison to other projects (e.g., less than normal traffic generation);

- Unique building requirements of a particular industrial use;

- Transfer of development potential between parcels of land in the vicinity of the project.

General Plan Policy LU 3.7 (Ref. 3, pages 3-58 and 3-59) indicates that building heights shown in Table 3-6 of the Plan are thresholds which shall be applied to all industrial projects, and that additional building height may be granted at the City's discretion based on one or more of the following criteria:

- Extraordinary benefits to the City;

- Unique circumstances or special project design which would reduce its impacts in comparison to other projects;

- Unique building requirements of a particular industrial use.

General Plan Policy LU 4.1 identifies the allowed uses for each Open Space designation, and indicates that other uses may be allowed which achieve the intent of the General Plan (Ref. 3, pages 3-61 through 3-63). General Plan Policy 4.5 specifies that land dedicated to open space as part of development projects shall generally be designated Institutional or Private Open Space, and that open space easements or deed restrictions should be used to permanently protect such areas (Ref. 3, page 3-64).

General Plan Policy LU 7.0 (Ref. 3, page 3-77) defines the "Commercial/Industrial Overlay" designation, and indicates that this designation applies to land with convenient freeway access which presents a special opportunity for retailers with a regional customer base.

General Plan Policy LE 3.5.1 directs the City to provide high-volume retail shopping opportunities in concentrated centers within close proximity to freeway access. While General Plan Policy LE 3.6.1 directs the provision of retail and commercial services areas in industrial areas to serve industrial employers and employees (Ref. 3, page 5-20).

General Plan Policy OS 2.1.2 states that land uses and activities in areas adjacent to the San Francisco Bay National Wildlife Refuge must be compatible with, and, if possible, should promote the goals of the Refuge (Ref. 3, page 6-18). General Plan Policy OS 2.2.1 states that there shall be no net loss of wetlands as a result of development in Fremont (Ref. 3, page 6-18).

General Plan Policy T 1.2.1 states that the City should maintain a level of service "D," with a target Volume to Capacity ratio of 0.85 at major intersections, except where the achievement of such a level of service can be demonstrated to conflict with environmental, historic or aesthetic objectives or where regional traffic is a significant cause of congestion, but recognizes that LOS D may not be achieved within the Central Business District or the Industrial Planning Area (Ref. 3, page 8-39, as amended in 1996 [GPA 95-4]).

General Plan Policy NR 1.1.1 states that whenever feasible, natural and semi-natural wetland areas and their wildlife habitat shall be preserved or impacts minimized (Ref. 3, page 9-50). General Plan Policy NR 2.2.2 calls for the minimization of development impacts in upland areas adjacent to or associated with seasonal or other wetlands (Ref. 3, page 9-53). General Plan Policy NR 2.2.4 indicates that disruption of grassed or naturalized areas known to provide groundnesting for endangered, threatened or candidate animals is to be avoided (Ref. 3, page 9-53).

Zoning Ordinance

Currently, the Project site is zoned as a Planned District ("P" District). The purpose of a Planned District is to encourage and provide for a means of effectuating desirable comprehensive development and conservation with variations in siting, mixed land uses and/or varied dwelling types. The amenities and compatibility of Planned Districts are to be insured through the adoption of a precise site plan (Fremont Municipal Code, Section 8-21810). A Planned District site plan for the Pacific Commons Project was submitted and approved in 1996 (P95-10). That site plan provided for the development of a campus-like business park over approximately 587 acres (not including infrastructure) and dedication of approximately 155 acres to open space (City park and habitat preserve).

B. IMPACTS

Under the current CEQA Guidelines, the Project would be considered to have a significant environmental impact if it were to result in:

- The physical division of an established community;
- A conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental impact; or
- A conflict with any applicable habitat conservation plan or natural community conservation plan.

The Project site is currently undeveloped, and proposed development would not result in the physical division of any established community.

Proposed development at the Project site would primarily involve land uses which could be categorized as either Restricted Industrial (including office, research and development, wholesale and industrial uses) or "Commercial Overlay" (including hotel, retail and commercial services uses), although portions of the Project site would remain in Open Space uses supporting community recreation facilities, parks and wetlands. In terms of land uses proposed at the Project site, the Project is generally consistent with the policies set forth in the Fremont General Plan.

Under the terms of the agreement between the City of Fremont, the Project applicant, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the California Department of Fish and Game related to the approved Section 404 permit for the proposed development at the Project site, approximately 390 acres of the site would be permanently protected as wetland habitat, and would ultimately become part of the National Wildlife Refuge, with additional off-site acreage also to be utilized for the mitigation of development-related impacts to wildlife and their habitats. This would be consistent with General Plan Policy OS 2.1.2 (land use compatibility in areas adjacent to the National Wildlife Refuge), General Plan Policy OS 2.2.1 (no net loss of wetlands), General Plan Policy NR 1.1.1 (preservation of wetland areas and their wildlife habitat), General Plan Policy NR 2.2.2 (minimization of development impacts in upland areas near wetlands), and General Plan Policy NR 2.2.4 (avoidance of grassed or naturalized areas known to provide groundnesting for endangered, threatened or candidate animals). The proposed development of the Project site would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact.

In order to proceed with the development of the Project site as proposed, the Project applicant has requested a General Plan Amendment which would re-designate large portions of the Project site for Open Space use. With the Open Space portion of the Project site no longer available for development, the Project applicant proposes to intensify the use of the remaining portions of the site, and is requesting the City's discretionary approval of a reduced development area with approximately the same square footage of building space as the 1996 project. Such a concentration of buildings would result in a higher Floor Area Ratio (FAR) than would normally be permitted under General Plan Policy LU 3.6, and the City's discretionary approval of taller buildings than would normally be permitted under General Plan Policy LU 3.7. Development of the Project site as proposed would involve General Plan land use and circulation changes which would not be consistent with the land use designations currently shown in the Fremont General Plan for the site. However, the Project as currently proposed would be generally consistent with General Plan goals and objectives, and adoption of the proposed General Plan Amendment would effectively eliminate any inconsistency between current land use designations and proposed Project land uses.

The Project site as proposed would result in the development of approximately 305 acres at the Project site into a business park, the dedication of approximately 391 acres on-site for use as a natural preserve, the dedication of approximately 49 acres on-site for use as a City park, and the dedication of approximately 913 acres off-site for open space. Although this pattern of development would be considerably different from the on-site development pattern currently permitted under the Zoning Ordinance, adoption of the proposed Planned District Amendment would result in a modification of the current zoning designations at the Project site, which would enable the Project then to be fully consistent with the Zoning Ordinance.

There are currently no habitat conservation plans or natural community conservation plans in force at the Project site. As indicated above, development of the Project site would be fully consistent with the requirements which have been imposed by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the California Department of Fish and Game for the purpose of protecting plants, wildlife and habitat values at the site.

C. MITIGATION MEASURES

As indicated above, development of the Project site as currently proposed would result in a high-density development pattern which would be considerably different than that currently approved, since less than half of the site (305 acres of 768 acres) would be expected to accommodate approximately the same level of development which the Project applicant anticipated when the current land use approvals were granted in 1996. In terms of General Plan/Zoning consistency, the proposed Planned District Amendment could be accomplished without a General Plan Amendment to Open Space and still be consistent with the General Plan land use description. Planned districts are available for use in all General Plan land use designations if the City Council finds that zoning tool to be appropriate. The General Plan Amendment to Open Space is proposed here to better reflect the intended preservation use and to reinforce the requirements of the Resource Agencies. Therefore, no mitigation measures are indicated beyond adoption of the proposed General Plan Amendment which reflects the current proposal by the Project applicant.

IV. TRAFFIC, CIRCULATION AND TRANSIT

TJKM Transportation Consultants has updated the transportation analysis of the Pacific Commons Project to reflect changes in the description of the Project, in traffic modeling procedures and in the local transportation network since the previous traffic analysis was prepared as part of the 1996 Supplemental EIR. This updated analysis provides the basis for this chapter of the Supplemental EIR, and has been independently reviewed for accuracy and completeness by the Lead Agency's transportation staff and its technical consultant, CCS.

A. SETTING

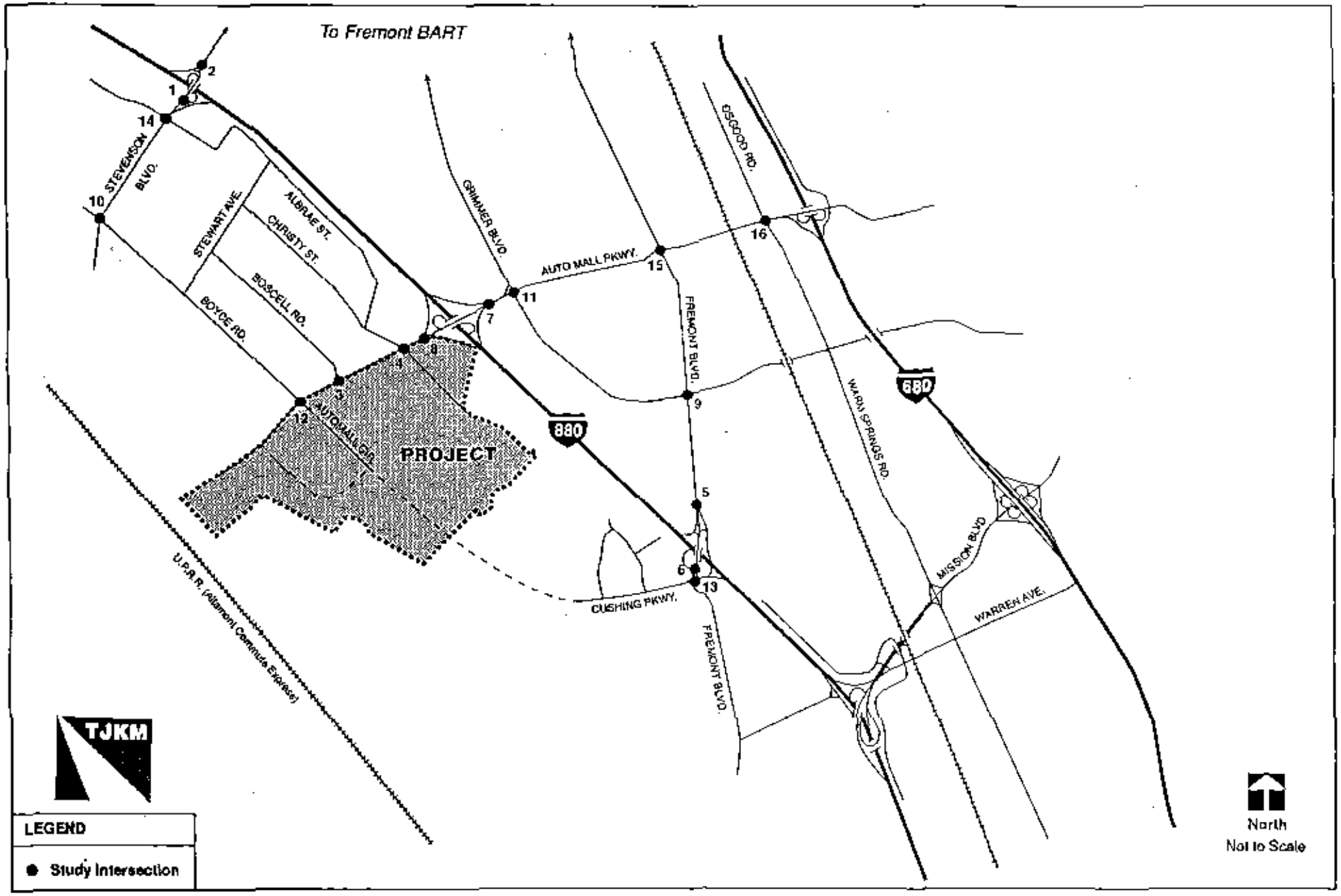
Roadways

Figure 6 shows the Project site and vicinity. The Project is bordered on the north by Auto Mall Parkway, to the east by I-880, to the south by the wetland preserve and to the west by portions of the wetland preserve and the Union Pacific Railroad right-of-way. The overall Project area includes existing development in several auto dealerships in the Fremont Auto Mall, located south of the intersection of Cushing Parkway and Auto Mall Parkway, and in industrial areas located between the Auto Mall and Nobel Drive.

The City of Fremont's Redevelopment Agency formed a redevelopment project area in 1984 for the purpose of financing the construction of four freeway interchanges along I-880: Auto Mall Parkway (then Durham Road); Fremont/Cushing; Mission Boulevard and Dixon Landing Road. The financing plan for the interchanges includes a joint powers agreement between the City of Milpitas and the City of Fremont for construction of the Dixon Landing Road interchange. It also includes resource commitments from the Fremont Redevelopment Agency (the Agency) and the transportation authorities of Alameda and Santa Clara counties for various aspects of the projects. Funding from the Redevelopment Agency is based on a policy to fund construction of "local" improvements. Regional and State contributions are necessary to pay for project elements that accommodate traffic carried on regional routes, such as State Highway 238. Caltrans has worked collaboratively with the City and assists in funding design and construction management costs for the interchanges.

Contributions to construction of these interchanges comprise 30 percent of the traffic impact fee imposed on all development within the City. Fee amounts are increased annually to reflect inflationary increases and periodically to reflect changes in actual costs and project scope. Cost increases related to regional impacts on the interchange design cannot be easily passed on in impact fees because the fees are tied to the cumulative direct effect of local development on interchange capacity. Contributions from the Agency, the State and the counties depend on those agencies' decisions among competing priorities. As a result, changes in costs often require complex, time-consuming revisions of the financing plan.

Figure 6
ROADWAY NETWORK IN THE VICINITY OF THE PROJECT SITE
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California



I-880 extends between San Jose and Oakland and is an eight-lane freeway near the Project site. Interchanges with Auto Mall Parkway and Fremont Boulevard provide primary links between the freeway and the local road network serving the Project site. In 1997, I-880 carried approximately 136,000 vehicles per day at the Fremont Boulevard interchange. All three I-880 interchanges in the study area have been recently reconstructed, essentially to their ultimate configuration. The Stevenson Boulevard, Auto Mall Parkway and Fremont Boulevard interchanges each have six lane overcrossings and are constructed in regular or modified partial cloverleaf configurations.

Auto Mall Parkway borders the Project site on the north and is designed as a six-lane arterial. Twenty-four hour vehicle counts obtained in 1997 indicate that this roadway carries 20,900 vehicles per day east of Boyce Road and 33,900 vehicles per day east of Grimmer Boulevard.

Stevenson Boulevard is a four-lane arterial located north of the Project site. Twenty-four hour vehicle counts obtained in 1997 indicate that this roadway carries 39,200 vehicles per day east of I-880 and 39,100 vehicles per day west of I-880.

Cushing Parkway is a four-lane undivided roadway that is currently accessible from Fremont Boulevard immediately west of its interchange with I-880. Ultimately, Cushing Parkway will extend through the Auto Mall to Auto Mall Parkway, where it will continue to the north on the existing Boyce Road right-of-way. Weekday counts obtained in 1997 indicate that Cushing Parkway carries 4,935 vehicles per day.

Christy Street is a two-lane roadway north and south of Auto Mall Parkway, and provides access to existing industrial development located on Brandin Court.

Auto Mall Circle is an existing private "loop" roadway serving the Auto Mall. The northern leg of the circle, immediately south of Auto Mall parkway, is a four-lane divided roadway. The loop section of the roadway is a two-lane, one-way roadway that operates with a counter-clockwise traffic flow.

The Alameda County Congestion Management Program (ACCMP) transportation system includes state highways, major arterials and transit systems. Elements of the ACCMP transportation system near the Project site are shown in **Figure 7**.

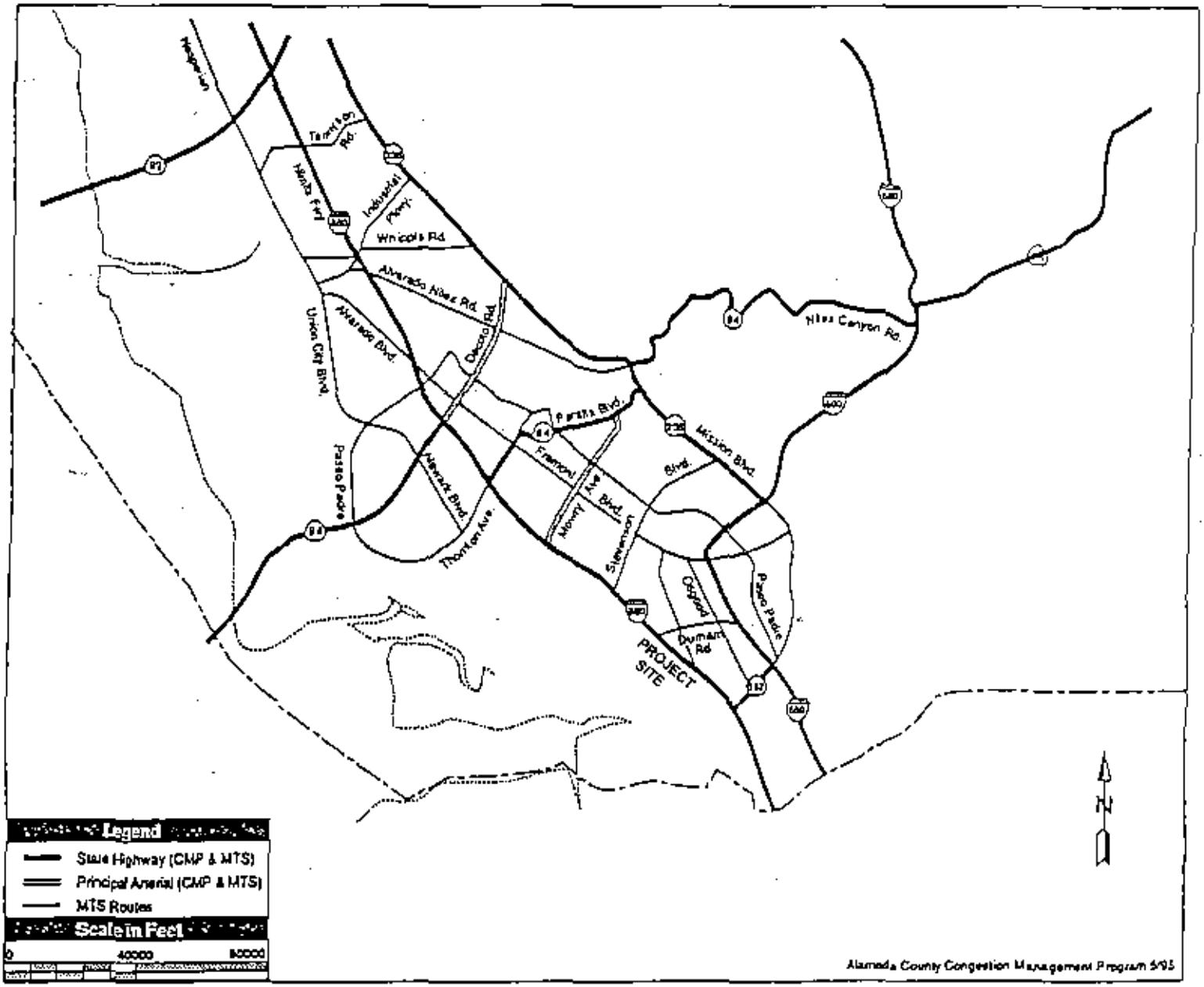
Bicycle Routes/Trails

There are no marked bicycle routes or trails in the immediate vicinity of the Project site.

Transit

Currently, no AC Transit buses serve the Project site. Route 235 currently extends along Stevenson Boulevard down Christy Street, just northerly of Auto Mall Parkway, then runs easterly to Albrae Street and loops back to Stevenson Boulevard. Route 22 runs southerly of the Project site along Fremont Boulevard to Gateway Boulevard and easterly to East Warren Avenue.

Figure 7
CONGESTION MANAGEMENT PLAN ROAD NETWORK
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California



Alameda County
Congestion Management Program – 1995 Update

On December 15, 1999, the AC Transit Board approved in concept a Transit Development Plan (TDP) which would result in a fundamental change in its service in South Alameda County to respond to the growth in population and jobs in the area. The principles of the TDP include:

- Making bus routes more direct;
- Establishing a grid of intersecting main routes to operate mainly on major arterials to improve travel time and area coverage;
- Operating secondary routes, connecting major trip generators or transfer centers (the developer, City staff and representatives of AC Transit have discussed possible locations and the nature of a transit center within the Project area. The location and character of bus routes and transit center is expected to be included in the concept plan being finalized for City approval);
- Developing flexible (inc contrast to fixed-route) service for times (e.g., midday and evening hours) and geographic areas where demand is low; and
- Complementing the fixed-route (and flexible-route) service with overlays of type service (e.g., Industrial Park express and limited stop service).

In discussions with AC Transit staff, major routes serving the Project site are likely to run along Auto Mall Parkway, Cushing Parkway and Boyce Road. Shuttle service between a future transit facility/train station on the westerly edge of the development and the industrial area have been discussed, but those discussions are at a very preliminary stage as of the writing of this document. A connection between the industrial area and the Santa Clara County Alder/Route 880 light rail station scheduled to be opened in December of 2000 was also discussed as a potential route. Bus service between the Project area and the future Warm Springs BART station is a long-term potential route. Implementation of portions of the plan is expected to start this year. Implementation of major features of the plan is contingent on the continuation of the half cent sales tax or other alternative source of financing.

Amtrak, Altamont Commuter Express (ACE) and the Capitol Corridor commuter trains operate along the Union Pacific rails adjacent to the Project site. The City's Redevelopment Agency's Industrial Area Redevelopment Plan includes as a project the construction of a train station at the westerly terminus of Auto Mall Parkway. The Planned District and General Plan Amendments include a train station or transit center at this location. The proposed Development Agreement would include sale of 29 or more acres to the City for $2.50 per square foot in this area. The proposed City use of this land include a City park and transit center.

B. IMPACTS

Under current CEQA Guidelines, the proposed development of the Project site would result in a significant environmental impact if it were to result in:

- An increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);

- Exceeding (either individually or cumulatively) a level of service standard established by the county congestion management agency for designated roads or highways;

- A change in air traffic patterns (including either an increase in traffic levels or a change in location) that results in substantial safety risks;

- A substantial increase in hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

- Inadequate emergency access;

- Inadequate parking capacity; or

- A conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

In addition, the proposed Project is subject to a review in terms of the Alameda County Congestion Management Plan because the Project involves a General Plan Amendment. The staff of the Alameda County Congestion Management Agency has indicated that because the Project's PM traffic will not exceed 100 peak hour trips when compared with the 1996 project, that agency will not be reviewing this Amendment (see letter from ACCMA in Appendix A).

Analysis Methodology

The technical data and analysis presented in this section were developed by TJKM (see Appendix C, FINAL Updated Traffic Study of the Proposed Pacific Commons Project, January 24, 2000). Analyses utilized to assess the impacts associated with development of the previous proposal for the Project site, which were documented in the 1996 Supplemental EIR (Ref. 10) were updated to assess Project-related impacts, and all traffic analyses conducted by TJKM for the Project as currently proposed were peer-reviewed by the City of Fremont's independent traffic consultant, CCS, and by City staff.

Traffic Forecasting Models

When the traffic analysis was conducted on the Pacific Commons Project for the 1996 Supplemental EIR, the City of Fremont used a gravity-based citywide traffic demand forecasting model. The traffic analysis projected long-range traffic conditions for key roadway segments and intersections based on land use input data in the form of dwelling units for residential development and employment projections for other land uses. The model produced forecasts for the AM and PM peak hours, which were used to develop daily forecasts on study area freeway and roadway segments.

The analysis in this chapter relies on the City's new traffic forecasting model, which uses the EMME 2 software. The City retained the firm of DKS Associates to prepare the updated traffic model, and it was recently completed. The model incorporates the latest land use projections contained in the Fremont General Plan and adopts land use, network and other modeling conventions utilized in the Alameda County Congestion Management Agency's (ACCMA) traffic model. Therefore, the Fremont model is now fully consistent with the ACCMA traffic model, and can be used to develop forecasts acceptable to that agency.

Because of the change of traffic models, the forecasts in this analysis are not directly comparable to those of the 1996 Supplemental EIR analyses. Although the new model relies on essentially the same highway and freeway network (updated to reflect any newer assumptions) as the previous model, the new model reflects more recent land use changes. The new model incorporates the regional land use forecasts prepared for the Association of Bay Area Government's *Projections '98*, and also relies on the latest land use forecasts within the City of Fremont. The new model relies on employment forecasts as an important trip-making characteristic, whereas the previous model utilized building square footage. The new model uses Year 2020 as its target year, whereas the previous model used Year 2010. Consequently, the traffic forecasts used in this analysis are considered to be more accurate and consistent with regional forecasts than those used in past analyses.

Intersection Analysis

Signalized intersection performance for this analysis was measured using the Intersection Capacity Utilization (ICU) methodology. Peak hour intersection conditions are reported as volume-to-capacity (V/C) ratios with corresponding levels of service (LOS). Appendix C contains detailed descriptions of all the level of service methodology.

The level of service measurement is a qualitative description of traffic operations, including expected traffic conflicts and delay. Levels of service describe these conditions in terms of such factors as speed, travel time, delays, freedom to maneuver, traffic interruptions, comfort, convenience and safety. Levels of service are given letter designations ranging from A to F. Level of Service (LOS) A indicates free-flow conditions with little or no delay, and LOS F indicates congested conditions with excessive delays and long backups.

The City of Fremont has established a target intersection V/C ratio of 0.85 (corresponding to mid-range LOS D). Fremont General Plan Policy T 1.2.1 (Ref. 3, page 8-39) states: "Maintain a Level of Service "D," with a target Volume to Capacity ratio of 0.85 at major intersections, except where the achievement of such a level of service can be demonstrated to conflict with environmental, historic or aesthetic objectives or where regional traffic is a significant cause of congestion or where substantial transportation improvements have been required and further mitigation is not feasible because of identified constraints. Level of Service "D" may not be achieved within the Central Business District and the Industrial Planning Area."

City practice has been to seek the mid-range LOS D as a target level of service, but to accept a high LOS D (up to V/C 0.90). For this analysis, an impact is considered significant when during the AM or PM peak hour an intersection degrades from an acceptable operating condition (V/C

0.85 or better) under General Plan conditions to worse than V/C 0.85 under Project conditions. Ordinarily when an intersection exceeds V/C 0.85 under General Plan conditions, a five percent increase or 0.05 increase in the V/C ratio is considered significant. However, as stated previously, current practice for industrial area intersections is to accept a V/C of 0.90.

The City of Fremont recently revised the methodology it uses to calculate intersection level of service, based on actual measurements made on the Fremont street system. Previously, the City utilized values of intersection capacity obtained from published or other sources, rather than based on actual Fremont conditions. The new values, which represent more realistic definitions of intersection capacity, have been incorporated into the calculations in this updated traffic analysis.

To comply with the usual requirements of ACCMA, future level of service analyses were performed for I-880 and I-680 in the Project vicinity. Both freeways are a part of the designated roadway system of the County's Congestion Management Program (CMP). Freeway level of service is based on hourly directional freeway volumes. The ACCMA methodology designates freeway mainline capacity as 2,000 vehicles per hour per lane for mixed flow and auxiliary lanes.

ACCMA typically requires an analysis of the Metropolitan Transportation System (MTS) streets in the area served by the Project. Near the Project site, streets in this category include Auto Mall Parkway between I-880 and I-680, and Fremont Boulevard from I-880 to north of Auto Mall Parkway. However, ACCMA has noted that since this Project does not result in the addition of 100 or more peak hour trips above the number associated with the project which was approved in 1996, this Project is exempt from CMP requirements (see ACCMA letter in Appendix A). Nonetheless, this chapter does contain analyses of the freeway system, Auto Mall Parkway and Fremont Boulevard.

Description of the Project

The Project Applicant has proposed a land use plan that establishes acreages to be developed with various uses and the general areas for development of various land use types. For purposes of traffic modeling, it is necessary to estimate the amount of floor area that would be developed for each land use type. The Project Applicant provided an estimate of the potential floor area of each proposed land use at build-out/full development.

The proposed Project (see **Figure 3**, above) would support land uses identified in **Figure 8**, below, which also shows the land uses currently permitted on the site under the Fremont General Plan. Land uses identified in **Figure 8** are for the Pacific Commons Project area and for the Auto Mall Area (which has already been developed). The floor area values shown in **Figure 8** represent a reasonable assumption for the ultimate build-out of the Project site, but do not represent a definitive development plan for the site.

Figure 8
COMPARISON OF CURRENT GENERAL PLAN LAND USE PLAN AND PROPOSED PROJECT LAND USE PLAN
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

Land Use	General Plan Land Use	Project Land Use
Pacific Commons		
Retail/Commercial	701,000 square feet	330,000 square feet
Commercial/Research & Development	4,640,000 square feet	4,910,000 square feet
Corporate Campus	—	1,160,000 square feet
Hotel/Conference Center	—	687,000 square feet
Warehouse	1,966,000 square feet	1,200,000 square feet
Office	150,000 square feet	—
Industrial	347,000 square feet	—
Manufacturing	515,000 square feet	—
Sub-total	8,319,000 square feet	8,287,000 square feet
Auto Mall	45 acres	45 acres

As indicated in **Figure 8,** the Project as currently proposed would have essentially the same amount of development as is currently approved for the Project site under the Fremont General Plan, although the type of development would be different than that approved under the General Plan. The Project incorporates a hotel/conference center (which is not anticipated under the current General Plan), but eliminates "big box" retail uses and proposes less acreage for retail uses, and proposes no industrial or manufacturing uses. Under the proposed Project, land designated for large corporate uses has replaced smaller areas which were designated for office uses under the General Plan.

Analysis Alternatives

To provide a thorough evaluation of the proposed Project, the following alternative development and network assumptions were analyzed:

Scenario 1 - Approved Project
Scenario 2 - Fremont 2020 Base Model (ABAG *Projections '98*)
Scenario 3 - Proposed Project

The land use and transportation network assumptions associated with both of these scenarios are described below.

Scenario 1 - Approved Project: In 1996, the City of Fremont approved a project similar to that currently proposed at the Project site, but occupying both the land currently proposed for an environmental preserve as well as the area currently proposed for development. That project was analyzed using the then-approved City traffic model. For comparative purposes, the intersection levels of service produced by the project approved in 1996 are portrayed in this chapter as Scenario 1, the approved project. The reader is referred to other discussions in this chapter which describe differences in the traffic models and in the intersection level of service analyses used to analyze the 1996 approved project and the currently proposed Project.

Scenario 2 - Fremont 2020 Base Model (ABAG *Projections '98*): This scenario incorporates the Fremont Base Model for the year 2020, drawn from the approved General Plan land use and road network for the entire City of Fremont, including the area that comprises the Project site. The Base Model does not represent the full build-out of General Plan land uses, but represents 2020 land use as portrayed by ABAG's *Projections '98*. The Base Model includes development of the Project site with industrial-related uses.

Principal features of the roadway network include a connection of Boyce Road and Cushing Parkway. At present, the southern extension of Boyce Road serves the Fremont Auto Mall in a loop street system. That roadway would be expanded and extended southerly to connect with Cushing Parkway at its current northern terminus northwest of Northport Loop West.

Other roadways external to the Project site have recently been improved. These include the I-880 interchanges at Stevenson Boulevard, Auto Mall Parkway and Fremont Boulevard. I-880 has been improved to include three mixed flow lanes and one high occupancy vehicle lane in each direction. Auto Mall Parkway along the Project site frontage has been improved significantly.

The roadway network and land use data used in this scenario are included in the City of Fremont's new traffic forecasting model, described above. The roadway network in this model is based on the City of Fremont General Plan and considers future roadway improvements that are expected to be completed by the year 2020. The land use data are also based on the City of Fremont General Plan. In the area occupied by the Project site (where approximately 25,000 persons are ultimately expected to be employed following development under the proposed Project), the City traffic model includes a development with approximately 7,000 employees, even though the proposed Project is similar in size to the project which was evaluated in the 1996 Supplemental EIR and subsequently approved by the City in September of that year. This provides an opportunity to use the new traffic model to compare the effects of the proposed Project with the effects associated with a hypothetical (and smaller) project at the site.

Scenario 3 - Proposed Project: For this scenario, the external roadway network assumptions are identical to those identified in Scenario 2, above. The area occupied by the developed portion of the Project site has been reduced to reflect the proposed wetland preserve, the density of development is proportionally increased, and the Project Applicant has developed a new conceptual roadway network. The principal features of this network include southward extension of Christy Street, Boscell Road, Cushing Parkway and Nobel Drive to serve as major on-site collectors. In addition, a central commons area is included along with several east-west collectors.

Trip Generation and Trip Assignment

Trip generation calculations were made for the proposed Project, with trip rates based on the *San Diego Trip Generators*, a standard reference document utilized by the City of Fremont. Trip rate summaries shown in this section are based on common traffic engineering methodologies for evaluating proposed projects. However, since the proposed Project is large, the analysis methodology used for impact determination involved the use of the City's traffic model, which uses different procedures to generate, distribute and assign trips than are used for evaluating smaller projects. The traffic model uses employment activity as the major trip indicator, rather than building square footage. However, the trip generation table (see **Figure 9**) is thought to accurately represent the relative characteristics of the Project as proposed.

For the purposes of comparison, the trip generation for the project evaluated in the 1996 Supplemental EIR and subsequently approved by the City of Fremont is shown as Table II in Appendix C. The previously approved project would generate an estimated 100,270 daily trips (8,260 trips during the AM peak period and 10,524 trips during the PM peak period). These totals include trips from the buildout of the Fremont Auto Mall and warehouse area, which (although not part of the Project as currently proposed) are of interest, because the Auto Mall and warehouse area is surrounded on three sides by the proposed Project. Compared with the previously approved (1996) project, the Project as currently proposed produces slightly more trips during the AM peak period (8,666), slightly fewer trips during the PM peak period (9,973), and slightly fewer trips on a daily basis (92,217).

Project trips were assigned to the City of Fremont roadway network using the City traffic forecasting model. **Figure 10** presents projected 2020 peak hour traffic volumes on key roadway segments in the vicinity of the Project site under Scenario 2 and Scenario 3, and **Figure 11** illustrates projected 2020 PM traffic volumes on proposed streets in the area, and the contribution of the Project as a percentage of the total traffic volume.

Intersections

Although all study intersections currently exist, the Project would create a new south leg at Auto Mall Parkway and Boscell Road. Several other intersections are assumed to be reconfigured under 2020 conditions. **Figure 12** summarizes the results of the intersection analysis for the proposed Project (detailed calculations are shown in Appendix B). Development of the Project site as proposed would be expected to have significant adverse effects on these intersections:

Impact 4-1: The I-880 SB Off-Ramp/Auto Mall Parkway intersection is projected to operate at LOS E (V/C = 0.92) in the AM peak period and above mid-point LOS D (V/C = 0.89) in the PM peak period, a *potentially significant* Project-related environmental impact. This impact was identified in the 1999 Supplemental EIR.

Impact 4-2: The Cherry/Boyce/Stevenson intersection is projected to operate above mid-point LOS D (V/C = 0.88) in the AM peak period, a *potentially significant* Project-related environmental impact. This impact was identified in the 1996 Supplemental EIR.

Figure 9
PROJECT TRIP GENERATION
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

Use	Size[1]		Daily Trips		A.M. Peak Hour					P.M. Peak Hour				
			Rate per Unit[2]	Total	Rate per Unit[2]	In:Out	Vehicle Trip Ends			Rate per Unit[2]	In:Out	Vehicle Trip Ends		
							In	Out	Total			In	Out	Total
Retail/Commercial	330	ksf	39.752	13,118	0.438	74:26	107	38	145	3.081	41:59	417	600	1,017
Commercial/R&D	4,910	ksf	9.049	44,431	1.079	85:15	4,503	795	5,298	1.083	18:82	957	4,361	5,318
Corporate Campus	1,160	ksf	9.049	10,497	1.079	85:15	1,064	188	1,252	1.083	18:82	226	1,030	1,256
Hotel/Conference Center	687 (24 acres)	ksf	300.00	7,200	18.0	60:40	260	172	432	24.0	60:40	346	230	576
Warehouse/Industrial	1,200	ksf	4.501	5,407	0.572	70:30	480	206	686	0.642	16:84	123	647	770
Public Park	29	acres	12.79	370	0.440	65:35	8	5	13	0.890	45:55	12	14	26
SUBTOTAL				81,017			6,422	1,404	7,826			2,081	6,882	8,963
Auto Mall	45	acres	—	11,200	--	--	510	330	840	—	—	400	610	1,010
TOTAL				92,217			6,932	1,734	8,666			2,481	7,492	9,973

Source: TJKM

Notes:

1 Square footages are based on estimated build-out potential as supplied by the applicant.
2 City of Fremont standard rates based on *San Diego Trip Generators*, San Diego Association of Governments.

Figure 10
COMPARISON OF PEAK HOUR TRAFFIC VOLUMES, 2020
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

		Base Model Scenario 2		Proposed Project Scenario 3			
		Total Peak Hour Volumes		Total Peak Hour Volumes		Project Volumes Only PM Peak	Project Volumes % of Total PM Peak
Street	Location	AM	PM	AM	PM		
Stevenson Boulevard	West of Albrae	2092	2521	2333	2797	33	1.2
Boyce Road	South of Stevenson	2112	3190	2396	3387	469	13.8
	North of AutoMall	2200	3341	2467	3476	557	16.0
Cushing Parkway	South of AutoMall	1341	2251	1856	2609	525	20.1
	South of Nobel	1384	2357	2032	2830	1126	39.8
	North of Fremont	1672	2797	2773	3677	1102	30.0
AutoMall Parkway	West of Christy	2253	2791	3019	3744	2283	61.0
	East of Christy	3109	4022	4888	5879	3796	64.6
	West of Grimmer	3753	4941	4194	5143	1180	22.9
	East of Grimmer	1716	2202	1919	2212	508	23.0
	West of Osgood	3707	4163	3683	4199	492	11.7
	East of Osgood	4145	3960	4229	4011	435	10.8
Grimmer Blvd.	North of AutoMall	2833	3569	3151	3770	587	15.6
	South of AutoMall	1902	2391	1901	2484	86	3.5
Fremont Blvd.	South of AutoMall	2174	2610	2062	2672	42	1.6
	North of I-880	3026	3352	3258	3670	179	4.9
	South of Cushing	1957	2409	2542	2917	41	1.4
I-880	Stevenson to AutoMall	11320	12293	11659	12498	1987	15.9
	AutoMall to Fremont	10226	10916	10353	11018	625	5.7
	Fremont to Mission	11835	12356	11934	12356	943	7.6
I-680	Washington to AutoMall	9478	10769	9538	10805	190	1.8
	AutoMall to Mission (S)	9745	12142	9675	11964	43	0.4

Source: TJKM, Fremont Traffic Models

Figure 11
PM PEAK HOUR TRAFFIC VOLUMES, 2020
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

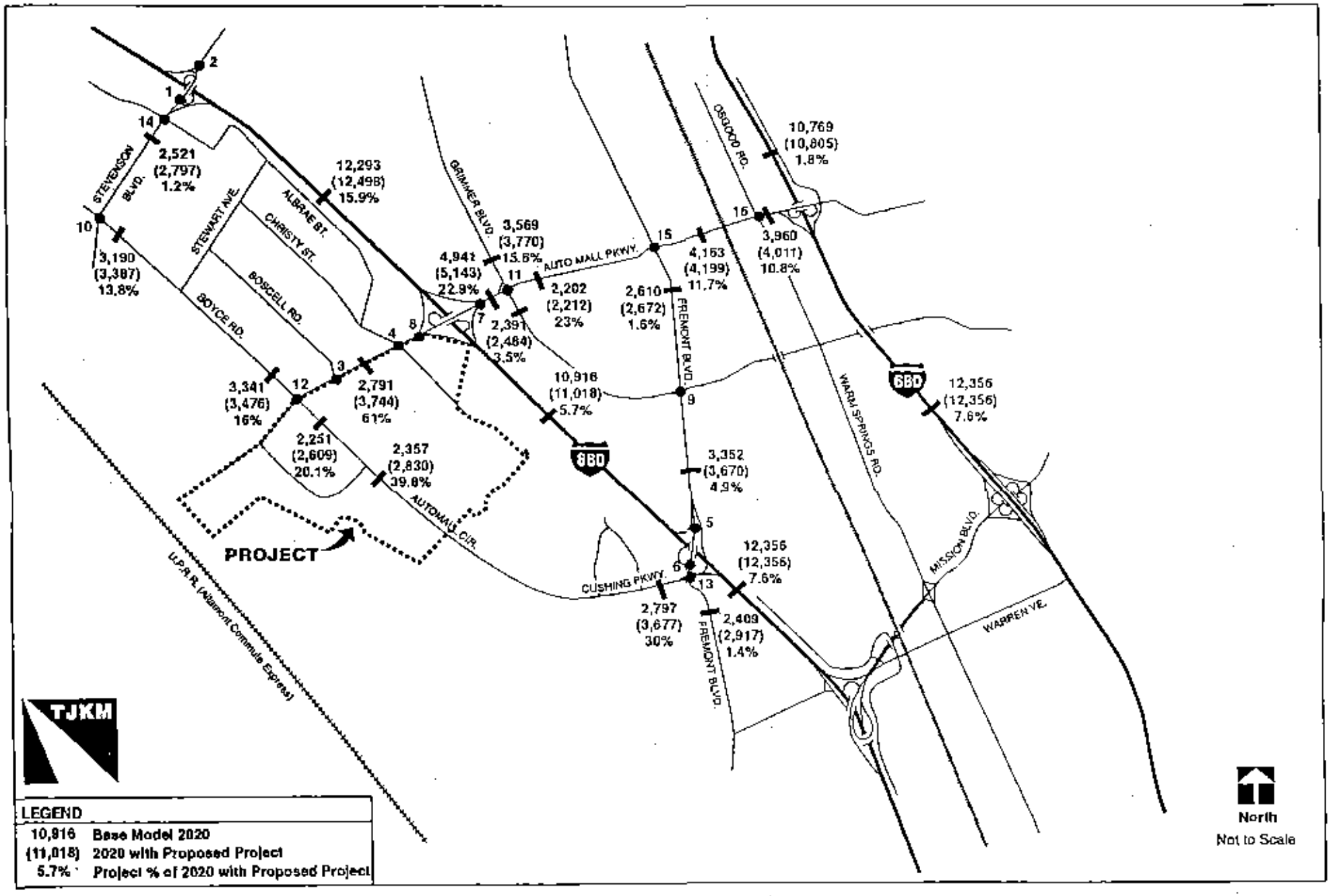


Figure 12
PROJECTED INTERSECTION LEVELS OF SERVICE - 2020 CONDITIONS
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

ID	Intersection	AM Peak Hour						PM Peak Hour					
		Catellus EIR 2010[1]		Base Model 2020[2]		Project 2020[3]		Catellus EIR 2010		Base Model 2020		Project 2020	
		V/C	LOS	V/C[4]	LOS	V/C[4]	LOS	V/C[4]	LOS	V/C[4]	LOS	V/C[4]	LOS
1	I-880 SB Off-ramp/Stevenson	0.94	E	0.53	A	0.56	A	0.89	D	0.68	B	0.71	C
2	I-880 NB Off-ramp/Stevenson	0.67	B	0.51	A	0.55	A	0.81	D	0.62	B	0.67	B
3	Boscell Rd./Auto Mall Pkwy	0.66	B	0.58	A	0.66	B	0.81	D	0.63	B	0.77	C
4	Chrisly SL/Auto Mall Pkwy	0.69	B	0.41	A	0.68	B	0.87	D	0.40	A	0.82	D
5	I-880 NB Off-ramp/Fremont	0.92	E	0.60	A	0.74	C	0.42	A	0.50	A	0.64	B
6	I-880 SB Off-ramp/Fremont	0.82	D	0.51	A	0.66	B	0.52	A	0.48	A	0.61	B
7	I-880 NB Off-ramp/Auto Mall Pw	0.82	D	0.54	A	0.70	B	0.64	B	0.69	B	0.81	D
8	I-880 SB Off-ramp/Auto Mall Pw	1.25	F	0.80	C	0.92	E	0.83	D	0.67	B	0.89	D
9	Fremont Bl./ S. Grimmer	0.76	C	0.78	C	0.83	D	0.66	B	0.64	B	0.69	B
10	Cherry/Boyce/Stevenson	0.84	D	0.79	C	0.88	D	0.85	D	0.66	B	0.78	C
11	Grimmer Bl./Auto Mall Pkwy	1.13	F	0.77	C	0.95	E	1.34	F	0.93	E	0.96	E
12	Boyce Rd./Auto Mall Pkwy	0.84	D	0.62	B	0.72	C	0.84	D	0.76	C	0.84	D
13	Fremont Bl. /Cushing Pkwy	0.81	D	0.53	A	0.70	B	0.89	D	0.55	A	0.67	B
14	Albrae/Balentine/Stevenson	0.77	C	0.48	A	0.55	A	0.99	E	0.76	C	0.79	C
15	Fremont/Auto Mall Pkwy	NA	NA	0.75	C	0.87	D	NA	NA	0.83	D	0.90	D
16	Osgood/Auto Mall Pkwy	NA	NA	0.91	E	1.07	F	NA	NA	0.91	E	1.01	F
16M	Osgood/Auto Mall Parkway Mitigated	NA	NA	0.88	D	0.96	E	NA	NA	0.89	D	0.91	E

Notes:

1. Catellus EIR 2010 = Approved 1996 project from FSEIR, land use for ABAG Projections '89. Approximately 20,000 Catellus jobs.
2. Base Model 2020 = CMA Approved 2020 Model, No Project (but includes 7,000 jobs in Catellus holdings) Land Use from ABAG Projections '98.
3. Project = CMA Approved 2020 Model, 25,000 Catellus jobs, Land Use from ABAG Projections '98.
4. Lane capacities of 1900 used for 2020 analysis; 1750 used for 2010 EIR analysis. (Based on actual field measurements)
5. NA = Intersection not evaluated in 1996 EIR.

Impact 4-3: The Grimmer/Auto Mall Parkway intersection is projected to operate at LOS E during the AM and PM peak periods, a *potentially significant* Project-related environmental impact. This impact was identified in the 1996 Supplemental EIR.

Impact 4-4: The Fremont/Auto Mall Parkway intersection is projected to operate above mid-range LOS D in both the AM period (V/C = 0.87) and PM period (V/C = 0.90), a *potentially significant* Project-related environmental impact. This impact was not identified in the 1996 Supplemental EIR.

Impact 4-5: The Osgood/Auto Mall Parkway intersection is projected to operate at LOS F during the AM and PM peak periods, a *potentially significant* Project-related environmental impact. This impact was not identified in the 1996 Supplemental EIR.

Congestion Management Plan Road Network

The City of Fremont traffic model can now be used to perform the ACCMA analysis of 2020 freeway conditions. This is because the Fremont model uses the network and the land use information that is consistent with the ACCMA model. In a letter from ACCMA, the City of Fremont was advised that a formal CMA analysis is not required (see Appendix A). However, the following freeway analysis is included for the information of the reader.

Peak hour directional forecast model results were compared with capacities on the facilities in question. Capacities were calculated on the basis of 2,000 vehicles per hour per lane for mixed flow and auxiliary lanes and 1,500 vehicles per hour per lane for auxiliary lanes. The Alameda County Congestion Management Plan has adopted LOS E as the standard for those roadways evaluated in this chapter. Since HOV volumes are not included in the analysis, the capacity from HOV lanes are also excluded. Therefore, on a freeway that has three mixed flow lanes and one HOV lane in each direction, the directional capacity is reported as 6,000 vehicles per hour, or three lanes times 2,000 vehicles per lane.

Figure 13 presents the results of the ACCMA analysis. In general, on most freeway sections, in the peak commute direction the freeway is expected to operate at either LOS E or LOS F conditions in 2020, either with or without the proposed Project. In all but two cases, the proposed Project either results in similar, slightly improved, or insignificantly degraded operating conditions.

Impact 4-6: I-880 SB between Stevenson and Auto Mall Parkway. In the AM peak period, the proposed Project would cause the volume to capacity ratio to be increased from 1.05 to 1.12, which is a 6.6 percent increase. This would represent a *significant* Project-related environmental impact. This impact was identified in the 1996 Supplemental EIR.

Figure 13
PROJECTED LEVELS OF SERVICE - CMA ANALYSIS FOR YEAR 2020
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

			AM Peak Hour						PM Peak Hour					
			2020 Base Model			Project			2020 Base Model			Project		
Segment	*Lanes*	*Dir.*	*Volume*	*v/c*	*LOS*	*Volume*	*v/c*	*LOS*	*Volume*	*v/c*	*LOS*	*Volume*	*v/c*	*LOS*
I-880														
Mowry to Stevenson	3 + Aux.	NB	5189	0.69	B	5107	0.68	B	6581	0.88	D	6734	0.90	D
	3	SB	6060	1.01	F	6226	1.04	F	5703	0.95	E	5756	0.96	E
Stevenson to AutoMall	3	NB	4993	0.83	D	4936	0.82	D	6427	1.07	F	6629	1.10	F
	3	SB	6327	1.05	F	6723	1.12	F	5866	0.98	E	5869	0.98	E
AutoMall to Fremont	3	NB	4757	0.79	C	4748	0.79	C	5704	0.95	E	5590	0.93	E
	3	SB	5469	0.91	E	5605	0.93	E	5212	0.87	D	5428	0.90	D
Fremont to Mission	3 + Aux.	NB	5550	0.74	C	5611	0.75	C	5901	0.79	C	5678	0.76	C
	3 + Aux.	SB	6285	0.84	D	6323	0.84	D	6455	0.86	D	6678	0.89	D
I-680														
Mission (N) to Washington	3	NB	3252	0.54	A	3203	0.53	A	6060	1.01	F	6055	1.01	F
	3	SB	6233	1.04	F	6337	1.06	F	4544	0.76	C	4588	0.76	C
Washington to AutoMall	3	NB	3510	0.59	A	3463	0.58	A	6068	1.01	F	6124	1.02	F
	3	SB	5908	0.99	E	6075	1.01	F	4701	0.78	C	4681	0.78	C
AutoMall to Mission (S)	3 + Aux.	NB	3962	0.52	A	3837	0.51	A	6926	0.92	E	6862	0.91	E
	3 + Aux.	SB	5819	0.78	C	5828	0.78	C	5216	0.70	B	51025	0.68	B

Source: TJKM

Assumptions:

1. HOV lane volumes not included in this table.
2. Through lane capacity is 2000 vehicles per hour per lane.
3. Auxiliary lane capacity is 1500 vehicles per hour per lane.

Impact 4-7: I-680 SB between Washington and Auto Mall Parkway. In the AM peak period, the proposed Project would cause the volume to capacity ratio to be increased from 0.99 to 1.01. Although this is only a two percent increase, it would be considered a *significant* impact because the level of service would elevate from LOS E to LOS F. This impact was identified in the 1996 Supplemental EIR.

Internal Access and Circulation

Proposed traffic control devices at the Project site are shown in **Figure 14**. Near the Project site, signals exist or are needed at five locations along Auto Mall Parkway: at the I-880 northbound and southbound ramp intersections, at Christy, at Boscell, and at Boyce/Cushing Parkway. Internally, traffic signals are desirable in at least three intersections along through streets that experience high volumes of cross traffic and/or turning traffic. These are locations along through streets that experience high volumes of cross traffic and/or turning traffic. The through streets shown in addition to Auto Mall Parkway are Christy, Boscell, Boyce and Nobel. All intersections approaching these through streets are equipped with stop signs. Also, one- and two-way stop signs are suggested at all other intersections for safety purposes and to prioritize vehicle right-of-way.

As noted, all major streets at the Project site are predominantly north-south streets. These are the streets that will have four lane requirements. The three major streets approaching Auto Mall Parkway are recommended to have at least five lanes: three approaching the intersection and two departing. Most four- and five-lane streets will need a median to accommodate left-turn lanes. Most other streets have a three-lane cross-section, with the third lane being a center turn lane. The central commons area (which is intended to have a high amount of pedestrian traffic and low speed vehicle travel) is shown to be a one-way couplet with only one lane (plus perhaps on-street parking) in each direction. The three-lane east-west streets are somewhat conceptual in that not all of them are required to provide adequate Project access. Some of these streets can be relocated (and, in some cases, removed) without harming Project circulation. More detailed design and traffic studies will be required before these lane requirements can be finalized.

Air Traffic

Development of the Project site would not result in any changes in existing air traffic patterns.

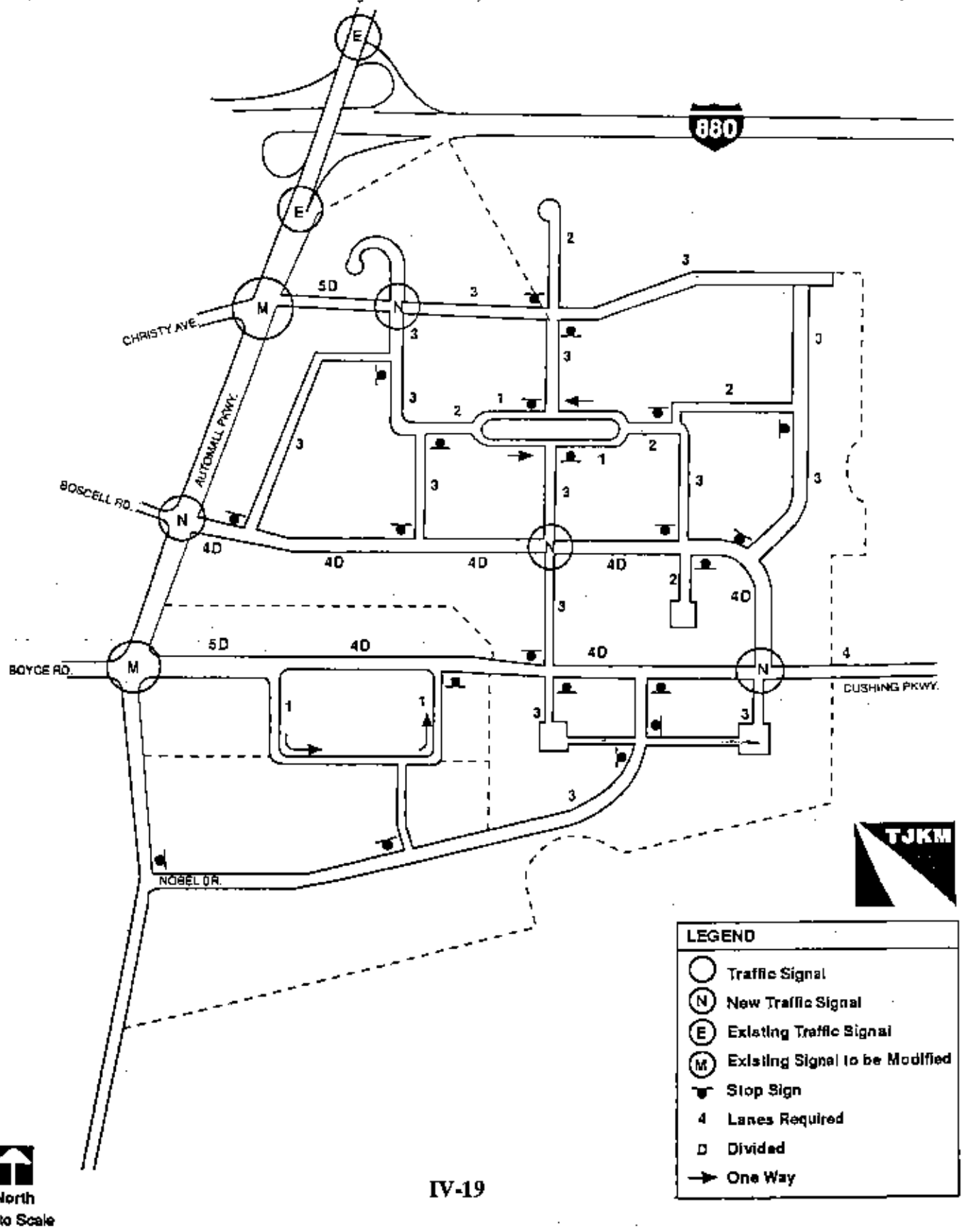
Design Hazards

There are no evident design-related hazards associated with the proposed circulation pattern or street standards at the Project site, and Project-related development would not be expected to generate any significant hazards associated with incompatible use of roadways.

Emergency Access

Emergency access to the Project site (and to other portions of Fremont west of I-880) would be substantially improved as a result of the proposed development, particularly as a result of the proposed completion of Cushing Parkway. Emergency access to all portions of the Project site would be regarded as adequate following development as proposed.

Figure 14
PROPOSED TRAFFIC CONTROL AND LANE REQUIREMENTS
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California



Parking

All development proposed at the Project site will be required to comply with all City of Fremont standards and regulations related to the provision of adequate off-street parking. Although surface parking lots associated with each individual structure would provide the bulk of the required parking at the Project site, a series of large, multi-story parking structures would be built adjacent to the structures in the "Great Street" area.

Alternative Transportation and Transit

The Project would be consistent with adopted policies, plans and programs intended to support the use of alternative transportation. Bus turnouts would be designed and constructed as integral components of the street right-of-way, and bus shelters would be provided to support on-site transit/shuttle routes. In order to encourage the use of bicycles, bike racks and bicycle storage facilities would be located in highly-traveled, well-lit areas throughout the development.

The Project site is not currently served by public transit. However, the development of the Project site as proposed would increase the potential public transit demand. Based on 1990 Census journey to work values, approximately 2.7 percent of the persons working in Fremont used some type of transit for work trips. Based on an estimated employment level of 25,000 people, approximately 675 people who would be working at the Project site would be expected to provide a demand for transit service based on the 1990 usage level.

Impact 4-8: The proposed Project would be expected to increase the demand for transit in a location that is not currently served by commuter rail or other transit service. This is considered a *potentially significant* Project-related environmental impact.

C. MITIGATION MEASURES

Intersection Improvements

Mitigation 4-1: I-880 SB Off-Ramp/Auto Mall Parkway: Additional improvements beyond the expected improvements are not feasible. **The Project-related impact to this intersection is an unavoidable significant environmental impact.** This Project-related impact was also identified in the 1996 Supplemental EIR.

Mitigation 4-2: Cherry/Boyce Stevenson: Although no lane additions are needed for this intersection, the intersection will eventually need to be signalized. The level of service and the intersection operations would be significantly improved if the westbound approach were restriped for two left-turn lanes, one through lane, and one right-turn lane. This would reduce the potentially significant impact at this intersection to a level of *less than significant*.

Mitigation 4-3: Grimmer/Auto Mall Parkway: This intersection has been constructed to its maximum practical capacity. **The Project-related impact to this intersection is an unavoidable significant environmental impact.** This Project-related impact was also identified in the 1996 Supplemental EIR.

Mitigation 4-4: Fremont/Auto Mall Parkway: The following lane patterns are required at this intersection: Northbound - two left-turn lanes, two through lanes and one right-turn lane; Southbound - two left-turn lanes, two through lanes and one right-turn lane; Westbound - two left-turn lanes, two through lanes and one shared through and right-turn lane; Eastbound - two left-turn lanes, three through lanes and one right-turn lane. These improvements would allow the intersection to operate at a high LOS D (V/C = 0.90. Although this V/C ratio would be higher than the desired target V/C of 0.85 (mid-range LOS D), it would appear to be acceptable under the City of Fremont's General Plan, which recognizes that this target may not be achievable in the Industrial Planning Area. These improvements would reduce the Project-related impact at this intersection to a level of *less than significant*.

Mitigation 4-5: Osgood/Auto Mall Parkway: The following lane patterns are required at this intersection: Northbound - one left-turn lane, three through lanes and one right-turn lane; Southbound - two left-turn lanes, two through lanes and one shared through plus right-turn lane; Eastbound - two left-turn lanes, two through lanes and one shared through plus right-turn lane; Westbound - two left-turn lanes, one through lane and one shared through plus right-turn lane. With these lane patterns, the intersection would be expected to operate at LOS E, which is consistent with the findings of overriding considerations associated with the adoption of the Fremont General Plan.

Congestion Management Plan Road Network

Mitigation 4-6: I-880 SB between Stevenson and Auto Mall Parkway. The City shall require the Project developer to implement a Transportation Demand management program to promote trip reduction measures and alternative modes of commute to mitigate impacts to southbound I-880 between Stevenson and Auto Mall Parkway during the AM peak period. However, because it is not possible to assure that the necessary level of trip reduction will be achieved to reduce impacts to a level of less than significant, impacts to southbound I-880 between Stevenson and Auto Mall Parkway during the AM peak period are considered **unavoidable significant impacts**. This Project-related impact was also identified in the 1996 Supplemental EIR.

Mitigation 4-7: I-680 SB between Washington and Auto Mall Parkway. The City shall require the Project developer to implement a Transportation Demand management program to promote trip reduction measures and alternative modes of commute to mitigate impacts to southbound I-680 between Washington and Auto Mall Parkway during the AM peak period. However, because it is not possible to assure that the necessary level of trip reduction will be achieved to reduce impacts to a level of less than significant, impacts to southbound I-680 between Washington and Auto Mall Parkway during the AM peak period are considered **unavoidable significant impacts**. This Project-related impact was also identified in the 1996 Supplemental EIR.

Alternative Transportation and Transit

Although the construction of a Transit Center is not formally part of the Project as currently proposed, a portion of the Project site has been identified as a possible future site for such a facility (see **Figure 3**, above). This site would be on land to be dedicated by the Project Applicant to the City of Fremont, and would provide commuter access to the Altamont Commuter Express (ACE) trains and the Capitol Corridor trains, which operate along the Union Pacific rails adjacent to the Project site if a transit facility/train station is approved by these train operators. According to staff of the ACE, location of a train station in the area is possible (Contact: Stacey Mortensen, San Joaquin Regional Rail Commission, Altamont Commuter Express).

Mitigation 4-8: The Project developer shall assist AC Transit or other providers with the extension of transit service to the Project site and the future train station at Auto Mall Parkway. Purchasing transit passes in bulk for distribution as a component of a TDM program is one means of assisting AC Transit with a system expansion. Transit service to the Project site should be provided on 30 minute headways or on headways consistent with CMP transit performance standards and AC Transit service standards. Transit service to the Project site should include linkage with BART. The location of transit stops shall be coordinated with AC Transit and the City of Fremont as additional information concerning the location of buildings becomes known. The transit stops shall be clearly marked with route and schedule information. The level of transit assistance to be provided by the Project developer shall be specified in the TDM program which is adopted for the Project. The Project site includes land for a future train station at the westerly terminus of Auto Mall Parkway. The Project developer shall cooperate with the City in its efforts to obtain rail transportation provider approval of a train station at the Auto Mall Parkway location. Adequate support for public transit operations would reduce this Project-related impact to a level of *less than significant*.

V. VISUAL AND AESTHETIC CONSIDERATIONS

A. SETTING

The Project site can be seen by motorists traveling on I-880 and on Auto Mall Parkway, Cushing Parkway and the North Port Loop. The site is generally flat and grassy, although the PG&E transmission lines and towers on the western portion of the site are a prominent visual feature.

From the Project site, immediate views are mainly of undeveloped, semi-rural grassland. Several isolated one- and two-story office/industrial structures are also visible along Boyce Road to the north, along Brandin Court to the east, and along North Port Loop to the south. More distant views include the Nimitz Freeway (I-880) and Fremont Hills to the east, and lands along San Francisco Bay, as well as several small hills associated with the nearby landfill site, to the west.

The Fremont General Plan does not identify any unique visual resources at the Project site (Ref. 3, Figure 9-8, page 9-43). The Nimitz Freeway (I-880) has been designated a Scenic Route (County and City) by the Fremont General Plan (Ref. 3, Figure 9-9, page 9-46). Under General Plan Policy NR 14.1.4, adequate landscaping should be maintained for scenic roads to enhance their character. The 1975 "Scenic Highway Element" calls for heavy screening along the freeway from Auto Mall Parkway to Fremont Boulevard, although the degree of screening necessary would be dependent on the visual quality of the adjacent land and the existence of significant vistas (Ref. 3, pages 9-72 and 9-73).

B. IMPACTS

Under current CEQA Guidelines, the Project would have a significant environmental impact if it were to result in:

- A substantial adverse effect on a scenic vista;
- Substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantial degradation of the existing visual character or quality of the site and its surroundings; or
- The creation of a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area.

Visual Character of Proposed Development at the Project Site

Figure 15 provides a diagram of the building typology proposed for portions of the Project site which would be developed. **Figure 16**, **Figure 17**, **Figure 18**, **Figure 19** and **Figure 20** provide additional details regarding the characteristics of structures which are proposed for the site.

Figure 15
BUILDING TYPOLOGY DIAGRAM OF A PORTION OF THE PROJECT SITE
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

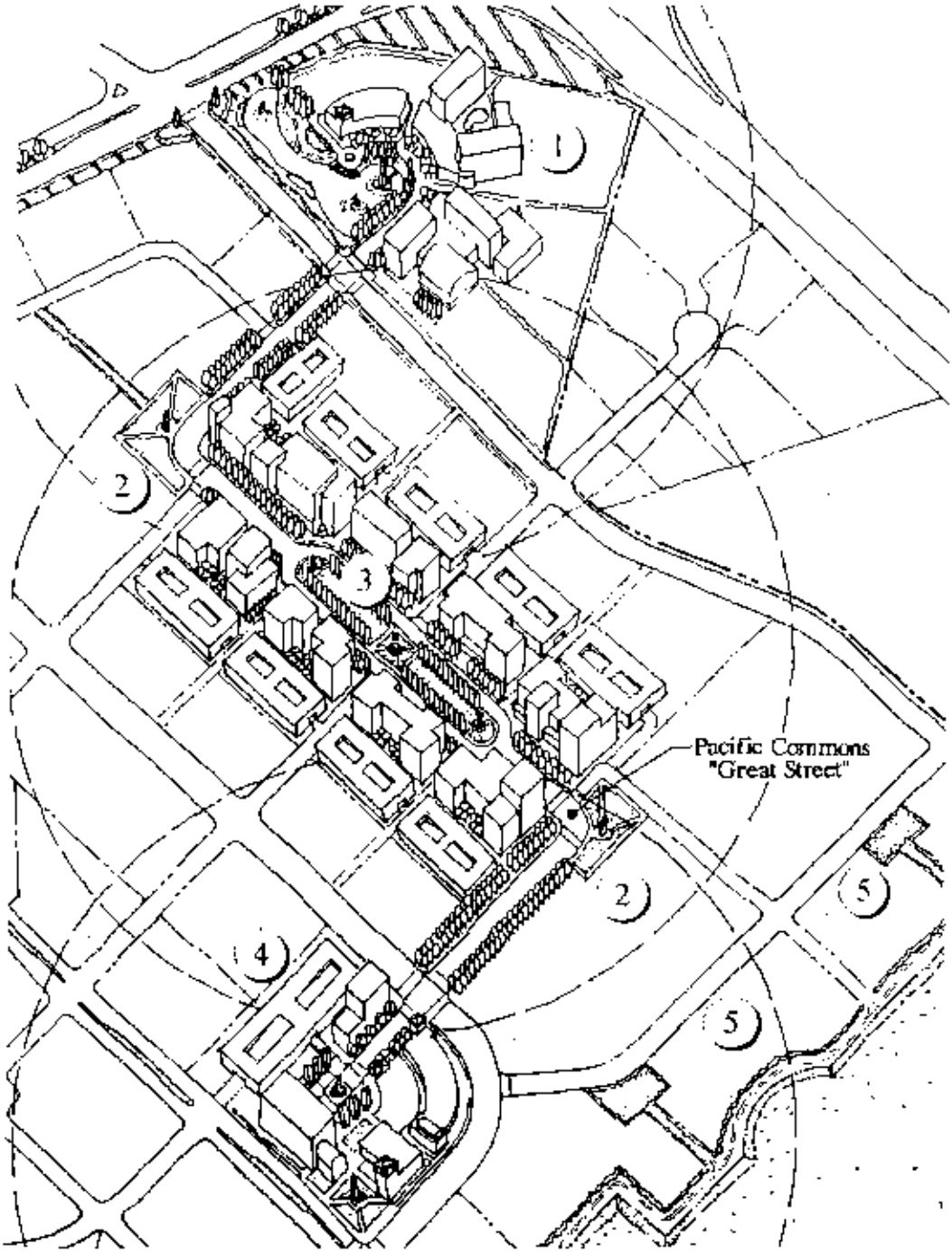


Figure 16
CONCEPT FOR PROPOSED HOTEL/BUSINESS CENTER
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

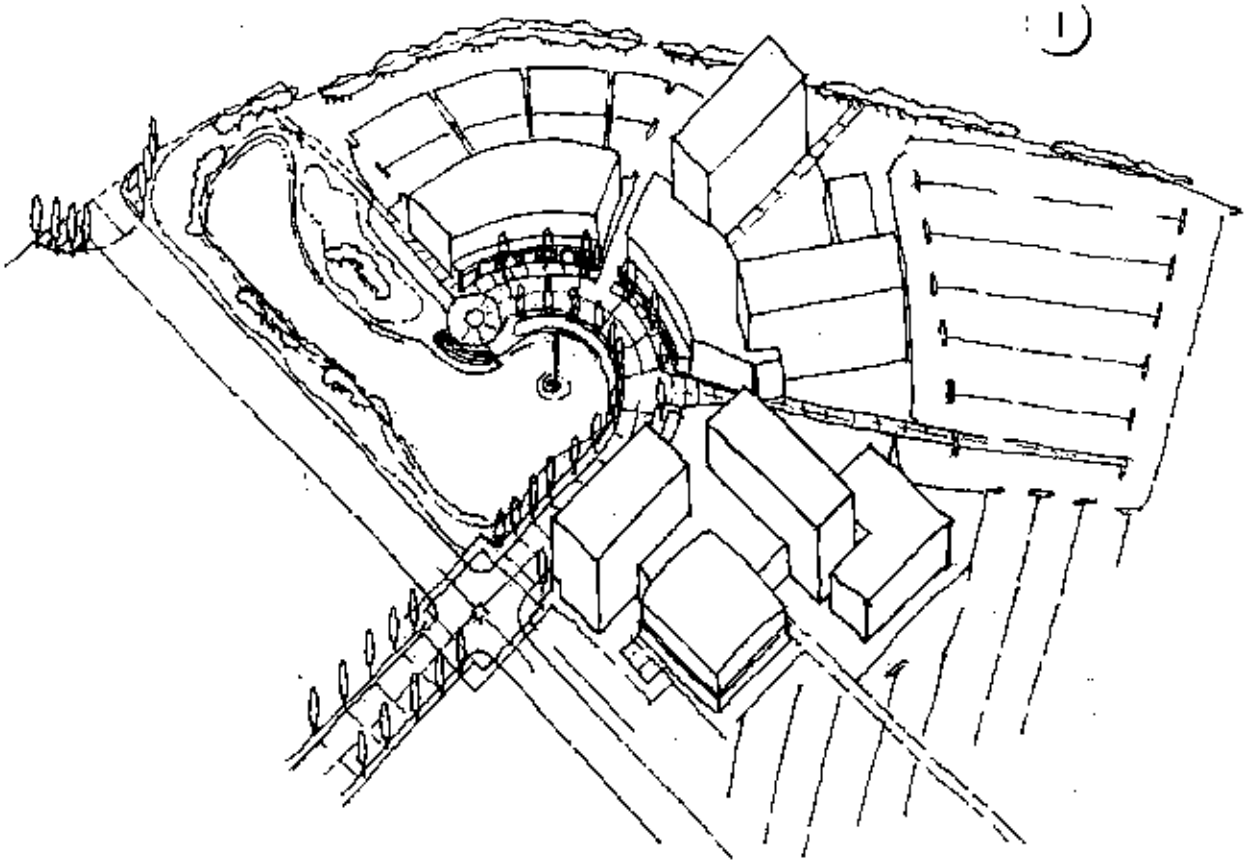


Figure 17
CONCEPT FOR PROPOSED NORTH & SOUTH COMMONS
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

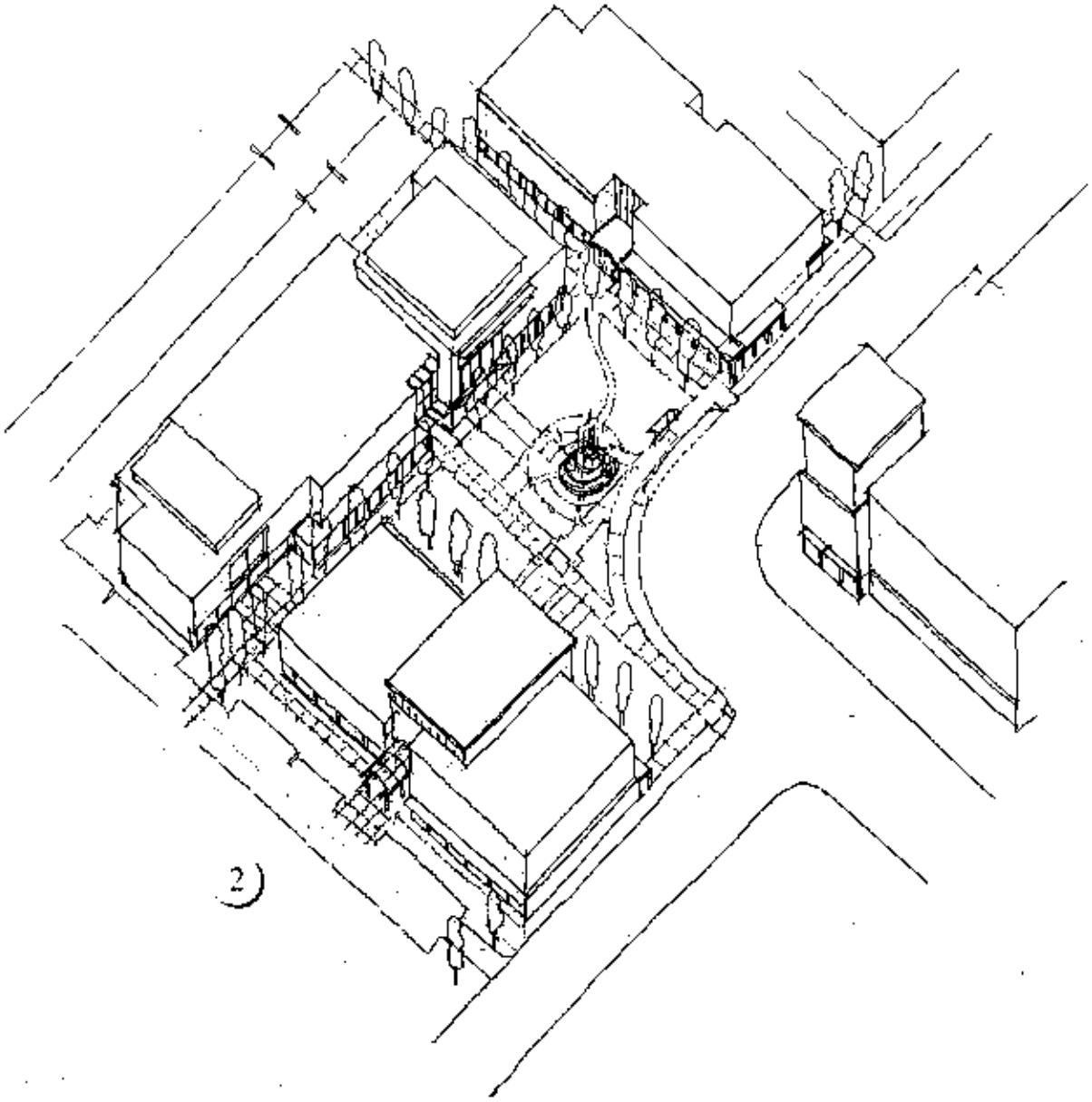


Figure 18
CONCEPT FOR THE "GREAT STREET" AT CENTRAL COMMONS
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

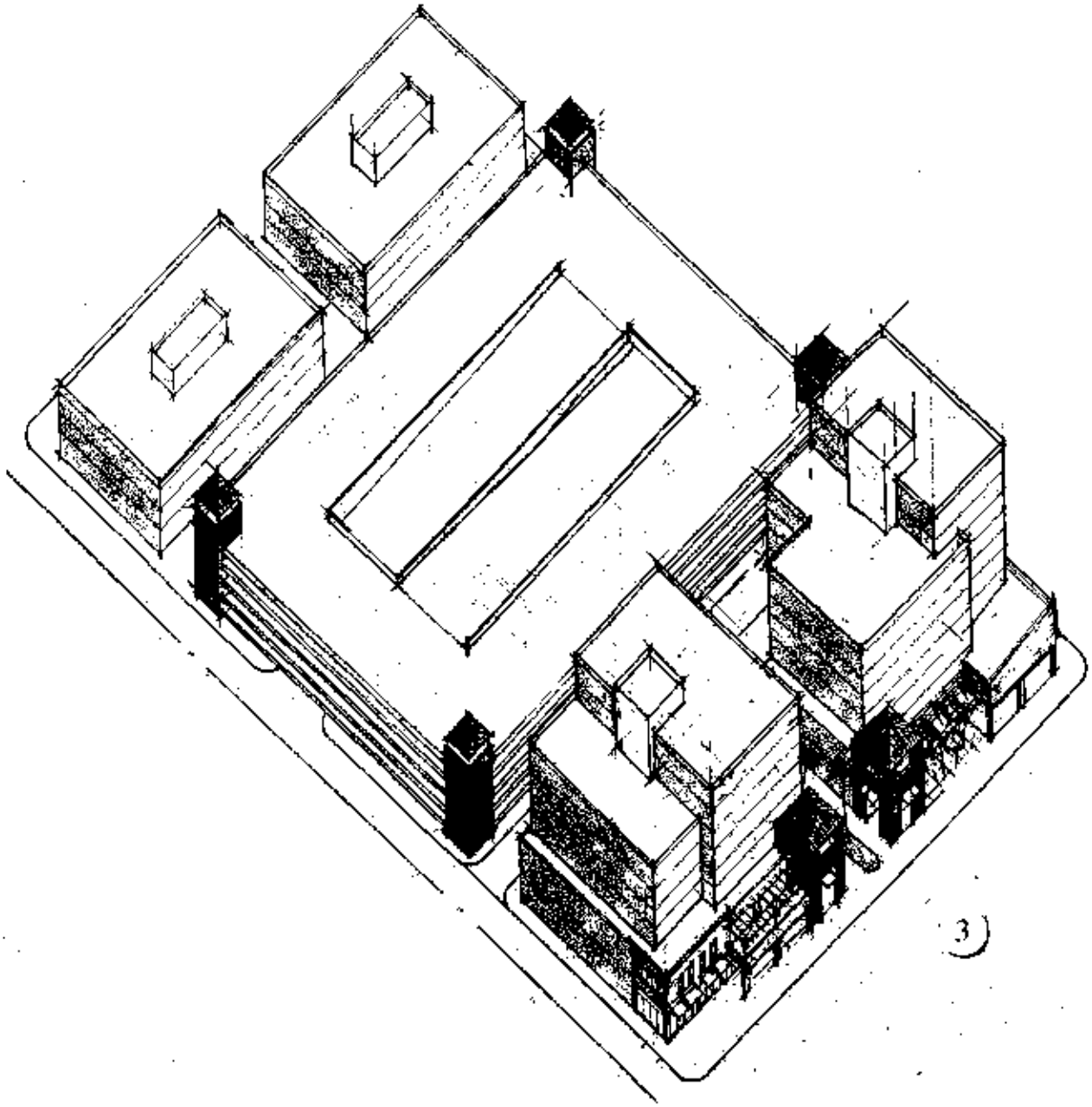


Figure 19
CONCEPT FOR ACTIVITY CENTER AT SOUTH GATEWAY/FOUNTAIN PLAZA
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

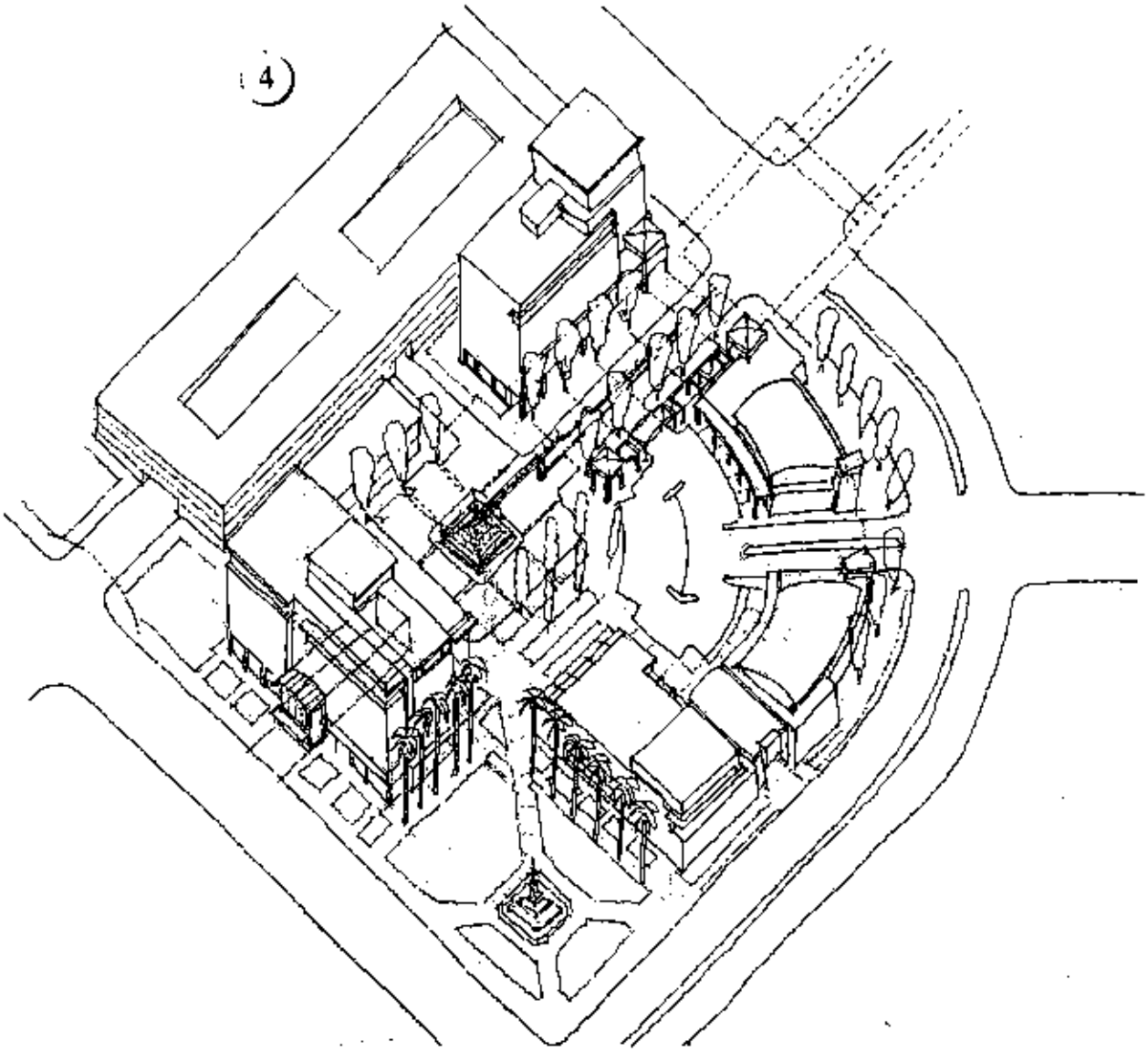
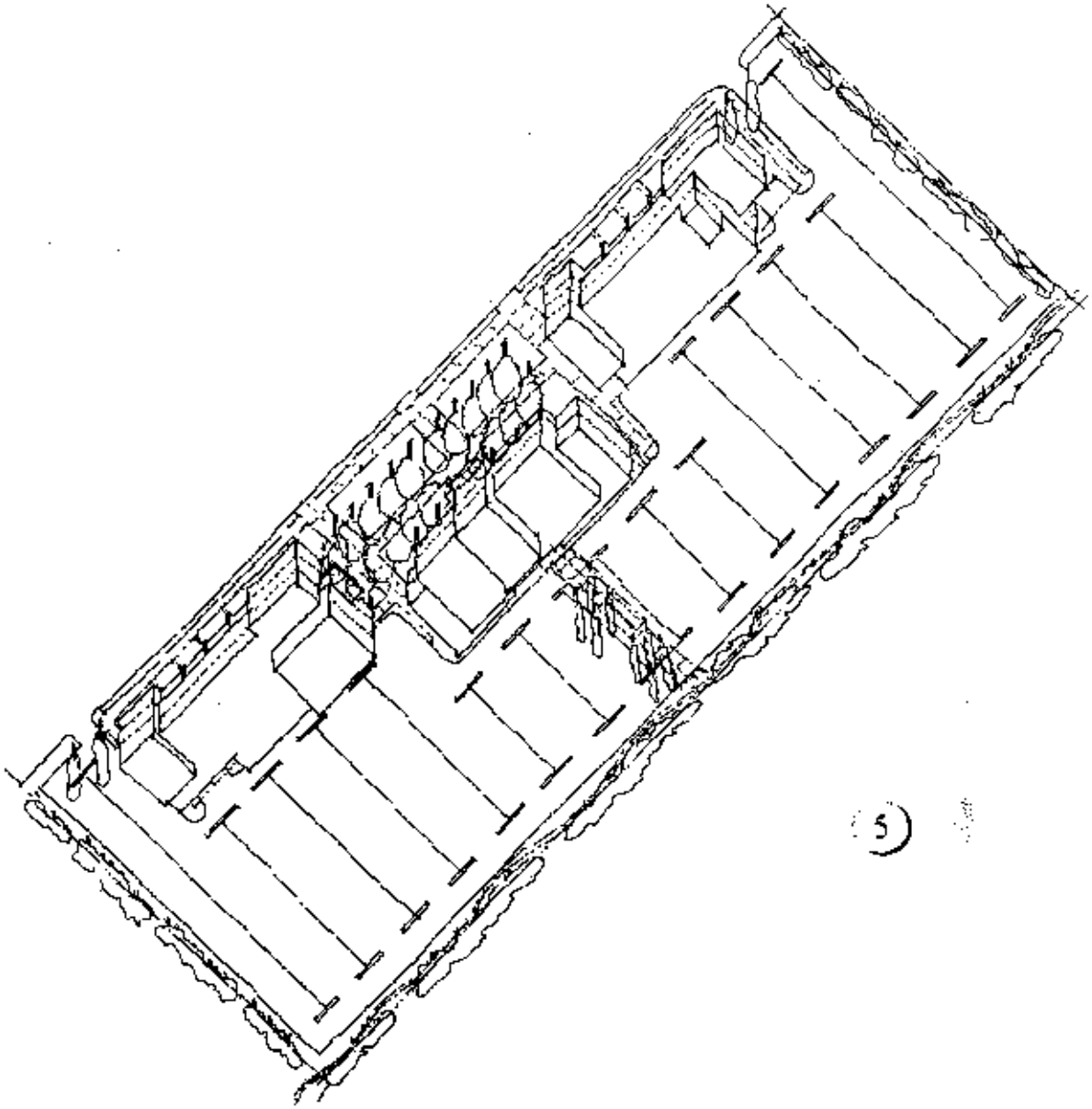


Figure 20
CONCEPT FOR OUTER PARCEL BUILDINGS/PRIVATE COMMONS
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California



Scenic Vistas

The City of Fremont has not formally identified any "scenic vista" associated with the Project site. Although development of the site as proposed would result in major changes in the views currently available through and near the Project site, it would not have any "substantial adverse effect" on any formally-identified scenic vista. Views directly related to the 391-acre portion of the Project site to be maintained as a Preserve Area would remain nearly unchanged (with the exception of the elevated portion of Cushing Parkway and the associated vehicular traffic).

Current grassland views of the site from inland areas of Fremont, I-880 and the streets surrounding the site would be replaced on approximately 40 percent of the site by views of numerous two- to eight-story structures (some approximately 100 feet tall). For the purposes of comparison, **Figure 21** provides a photograph of the Project site taken from a point south of Auto Mall Parkway looking west across I-880, and a sketch showing the relative size of structures which would be visible from this vantage point following development as proposed. Distant views of the National Wildlife Refuge from I-880 could be retained along that portion of the Project site which would be preserved as wetlands (depending on the extent of screening to be provided by landscaping along the freeway, if any). It should be noted that some distant views of the National Wildlife Refuge are already obstructed by existing industrial structures, the landfill (which currently rises 110 feet above the surrounding terrain, and which could reach a height of up to 150 feet with the necessary County and State approvals), and several PG&E transmission lines located on the Project site and surrounding properties.

Views of the development area from the southbound lanes of I-880 would be of the hotel/conference center area just southerly of the Auto Mall Parkway interchange (see **Figure 21**). Northbound motorists on I-880 would have views across the southbound lanes and Preserve Area of a landscaped trail along the perimeter of the Preserve Area near the edge of the surface parking area (see **Figure 20**), three- to four-story office buildings adjacent to the surface parking areas along the boundary of the Preserve Area, and distant views of eight-story buildings along the Great Street.

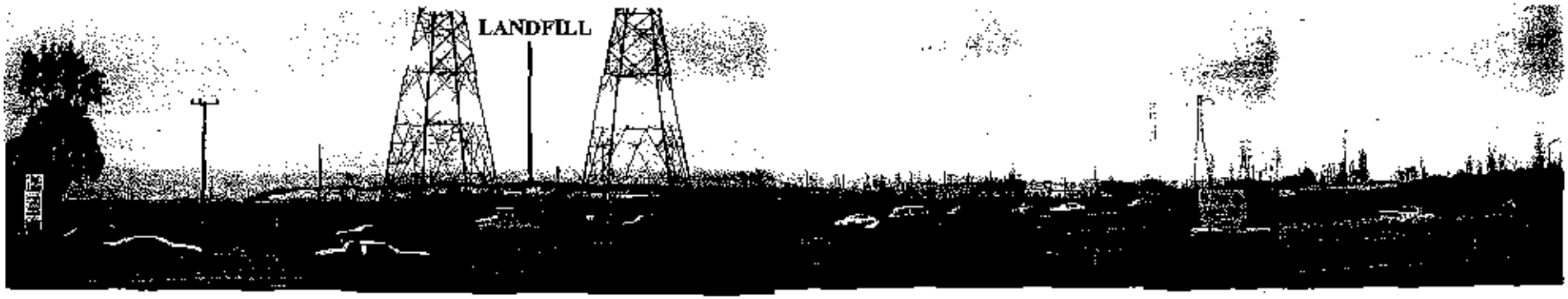
Scenic Resources

The City of Fremont has not formally identified any "scenic resources" at the Project site, and development of the site as proposed would not result in substantial damage to any formally-identified scenic resources (i.e., trees, rock outcroppings, and historic buildings within a state scenic highway).

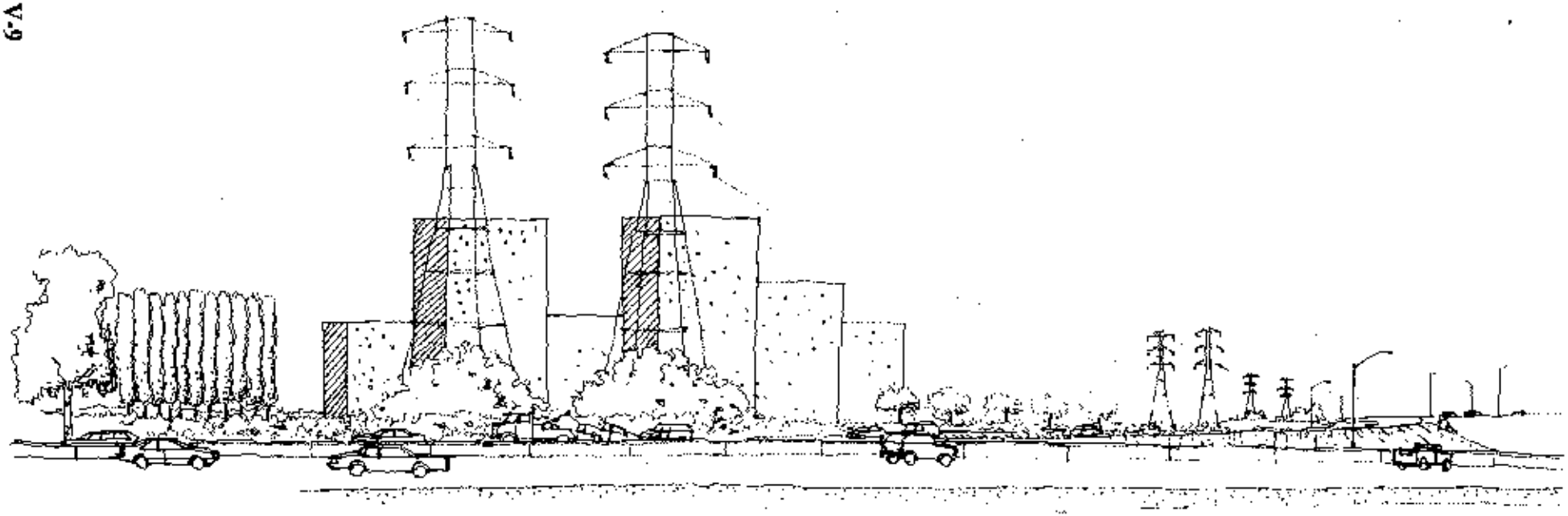
Change in Visual Character

As discussed above, the placement of buildings of two to eight stories (up to approximately 100 feet in height) at the Project site would result in major changes in the existing visual character of the site. Changes in visual character along the perimeter of the Project site could be mitigated to some extent through the use of landscaping. Development of the Project site as proposed is likely to result in substantial tree planting, which could have a "greening" effect on the visual character of the site.

Figure 21
PHOTOGRAPH OF EXISTING CONDITIONS AT THE PROJECT SITE FROM I-880 & SKETCH OF AREA SHOWING VISUAL EFFECT OF PROPOSED DEVELOPMENT
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California



Existing Condition



Proposed Sketch

From the Project site, the proposed development would irreversibly alter the semi-rural visual character of the area and would disrupt distant views of West Bay Hills and the Fremont Hills. The existing visual setting on approximately 300 acres (now largely grassland) would be replaced with high-density urban development. Although the visual effects associated with the proposed development would be major, these Project-related changes would not be regarded as a "substantial degradation" of the existing visual character of the area.

Light and Glare

The placement of numerous large structures at the Project site would create a major new source of possible light and glare, which could be moderated by the application of design criteria relating to building materials (e.g., no mirror glass, color palette regulations, etc.). While the Project site is located in an industrial area, and no residential development is proposed either at the site or in the immediate vicinity, light and glare on the Preserve Area should be minimized, to avoid impacts on that area. Development of the site as proposed (with a Project-related increase in light and glare), would not be expected to adversely affect the daytime or nighttime views of any residents living nearby. Although those currently working near the site and those currently traveling past the site on I-880, on North Port Loop, on Cushing Parkway or on Auto Mall Parkway can now get views through the site and beyond, the site does not currently provide any notable views that would be adversely affected in a significant way either by Project-related light in the nighttime or by Project-related glare in the daytime.

C. MITIGATION MEASURES

The City of Fremont will review conceptual and detailed landscape plans at later stages in the development approval process, and Project developers will be required to comply with all regulations and design standards related to landscaping, signage, outdoor lighting, screening and site maintenance. To mitigate potential light and glare impacts on the Preserve Area, the staff of the adjacent National Wildlife Refuge should be consulted when the detailed landscaping and lighting plans for development adjacent to the perimeter of the Preserve Area are submitted for approval.

VI. OTHER CONSIDERATIONS

A. FIRE PROTECTION, POLICE AND EMERGENCY MEDICAL SERVICES

While no new impacts on fire protection, police and emergency medical services have been identified in this report, this section is provided in order to convey information on the fire station location and more specific information related to the demand for police services than was included in the 1996 Supplemental EIR.

Setting

Fire protection services in the vicinity of the Project site are provided by the City of Fremont Fire Department. It is City policy to maintain the capability to respond to 95 percent of all emergency calls within five minutes of notification.

The Project site is located within Fremont Police Department Zone 3 (Warm Springs). The Fremont Police Department currently has 201 sworn officers. The response goal for Priority 1 emergency calls is within five minutes of notification, while non-emergency responses related to major crimes (not in progress) generally get a response within 20 minutes (Telephone conversation with Susan Aro, Business Manager, Fremont Police Department on December 15, 1999).

Currently, all fire stations in the City of Fremont provide paramedic services. Staff levels are maintained at one or two paramedics per engine company on a 24-hour basis. The City's standard for paramedic response is the same as the standard for fire protection services.

Impacts

Under current CEQA Guidelines, development of the Project site would have a significant environmental effect if it were to result in substantial adverse physical impacts associated with the construction of new facilities (or the physical alteration of existing facilities) which would be needed to maintain acceptable service ratios, response times or other performance objectives.

Although the proposed development of the Project site would result in an increased demand for fire protection, police and emergency response services, it would not require the provision of a new fire station or a new police station in order to maintain a response time of five minutes or less to all portions of the Project site. However, the fire station currently located west of I-880 and south of Landing Parkway is a temporary facility, and the Fremont Fire Department seeks a site for a permanent facility to replace it with a permanent facility south of the Project site. The project evaluated in the 1996 Supplemental EIR included a fire station location in the southerly portion of the project area. Because the establishment of the 391-acre Preserve Area precludes locating a new fire station in that southerly area, the City no longer plans on locating a fire station at the Project site (Telephone conversation with Penny Starr, Business Manager, Fremont Fire Department on December 15, 1999).

The Chief of Police has indicated that police-related concerns in the vicinity of the Project site are primarily traffic congestion and accidents, false alarms at businesses, and the demand for high technology crime investigation capacity. The proposed development of the Project site, which would bring approximately 25,000 employees into the area each day during the work week, would mean that the Police Department would need additional personnel to handle calls for service and traffic issues. The Chief of Police has indicated that the addition of one officer per A shift and B shift would require the addition of four officers. Development of the Project site as proposed would also require the addition of at least two community service officers (one on day shift A, and the other on day shift B) to handle non-emergency calls and minor traffic accidents (Memo from Craig Steckler, Chief of Police, City of Fremont to Susan Aro, Business Manager, Fremont Police Department, December 15, 1999).

Mitigation Measures

Although no mitigation measures are indicated in this instance (since the Fremont Fire Department would not require the construction of a new facility to adequately serve the Project site), it should be noted that the Project applicant shall comply with fire impact fees in effect at the time such fees are levied, and that all development at the Project site shall comply with all standard City requirements for fire protection and suppression (e.g., Fire Department review of precise development plans; hydrant, fire flow, water pressure and sprinkler requirements; etc.). Police services are paid out of the City's General Fund, to which sales tax and other revenue from the proposed Project would contribute.

B. PARKS AND RECREATION

Setting

The City of Fremont currently maintains a total of approximately 1,021 acres of land within its park system, including 11 citywide parks, 8 historic parks, 19 neighborhood parks, and 12 mini-parks. Although the Project site once supported a glider port and a drag strip, today there are no active recreational facilities in the vicinity of the Project site west of I-880. The nearest parks are Rix Park, Marshall Park and Irvington Park, all located at least two miles away, east of I-880.

Impacts

No significant impacts on parks were identified in the 1996 Supplemental EIR. For the purposes of comparison, when the proposed development of the site was approved in 1996, it was anticipated that between 30 and 50 acres of the 155-acre area identified as Commercial Recreation/City Parks/Wetlands would be available for park and recreational use, and that approximately 14 acres would be used for parks and project plazas in the developed portion of the site (see Ref. 10, page ES-1). Under the current Project, land proposed to be sold to the City for a City park and transit facility/train station would total approximately 29 acres, and the acreage devoted to parks and public plazas within the developed portion of the site would be reduced to approximately 6 to 7 acres (reflecting the lack of development in the Preserve Area).

A combination foot and bike trail almost four miles long is proposed to be located along the perimeter of the development. A segment of that trail approximately one mile in length would lie adjacent to the Preserve Area, which could result in potential conflicts between land uses in the developed portion of the Project site and in the Preserve Area.

Impact 6-1: It is expected that a fence would separate the Preserve area from the proposed foot and bike trail at the Project site. Human or pet (or pet litter) intrusion into the Preserve Area could impact the habitat. Proper design of the landscaping, lighting and fencing associated with the perimeter trail should minimize land use conflicts, although such conflicts between development and Preserve Area uses could represent a *potentially significant* Project-related impact.

Mitigation Measures

Mitigation 6-1A: Either prohibit dogs along the perimeter trail adjacent to the Preserve Area or require dogs to be leashed. If dogs are not prohibited along the perimeter trail adjacent to the Preserve Area, then dog walkers shall be responsible for disposing of dog litter.

Mitigation 6-1B: Request comments on trail design, landscaping, lighting and Preserve Area fencing from National Wildlife Refuge staff before final approval.

Taken together, these two mitigation measures should reduce potential conflicts between uses in the developed portion of the Project site and the Preserve Area to a level of *less than significant*.

C. STORM DRAINAGE AND FLOOD CONTROL

Setting

The Project site is located in the Zone 6, Line N, watershed. The total watershed of Line N is approximately 4.2 square miles, and receives storm runoff from five different storm systems. The Alameda County Flood Control and Water Conservation District (ACFCWCD) maintains Line N and its tributary channels.

The natural drainage of the Project site has been altered through the construction of open earth drainage channels. All runoff from the Project site either ponds or enters the drainage channel Line N-1 through a series of small ditches, drainages and culverts. Line N-1 discharges into Line N, and Line N drains to Mowry Slough. The sub-watershed of Line N-1 occupies approximately 1.9 square miles, 45 percent of the total Line N watershed. Line N-1 is an earth-lined trapezoidal channel with leveled banks that runs parallel to the southwest perimeter of the Project site.

All drainage channels within the watershed of Zone 6 have been sized to ACFCWCD criteria and can safely accommodate a five-year storm coincident with a 100-year tide, or a 15-year storm coincident with a moderately high tide. Prior to the construction of Line N-1, hydraulic calculations assumed that the Project site would be entirely developed as an industrial complex. Line N-1 was designed and constructed to accommodate 205 cubic feet per second (cfs), the

discharge associated with the five-year storm coincident with a 100-year tide. Both lines N and N-1 are capable of handling increased flow rates associated with the industrial/commercial development of the Project site (Ref. 10, pages 57 and 58).

Impacts

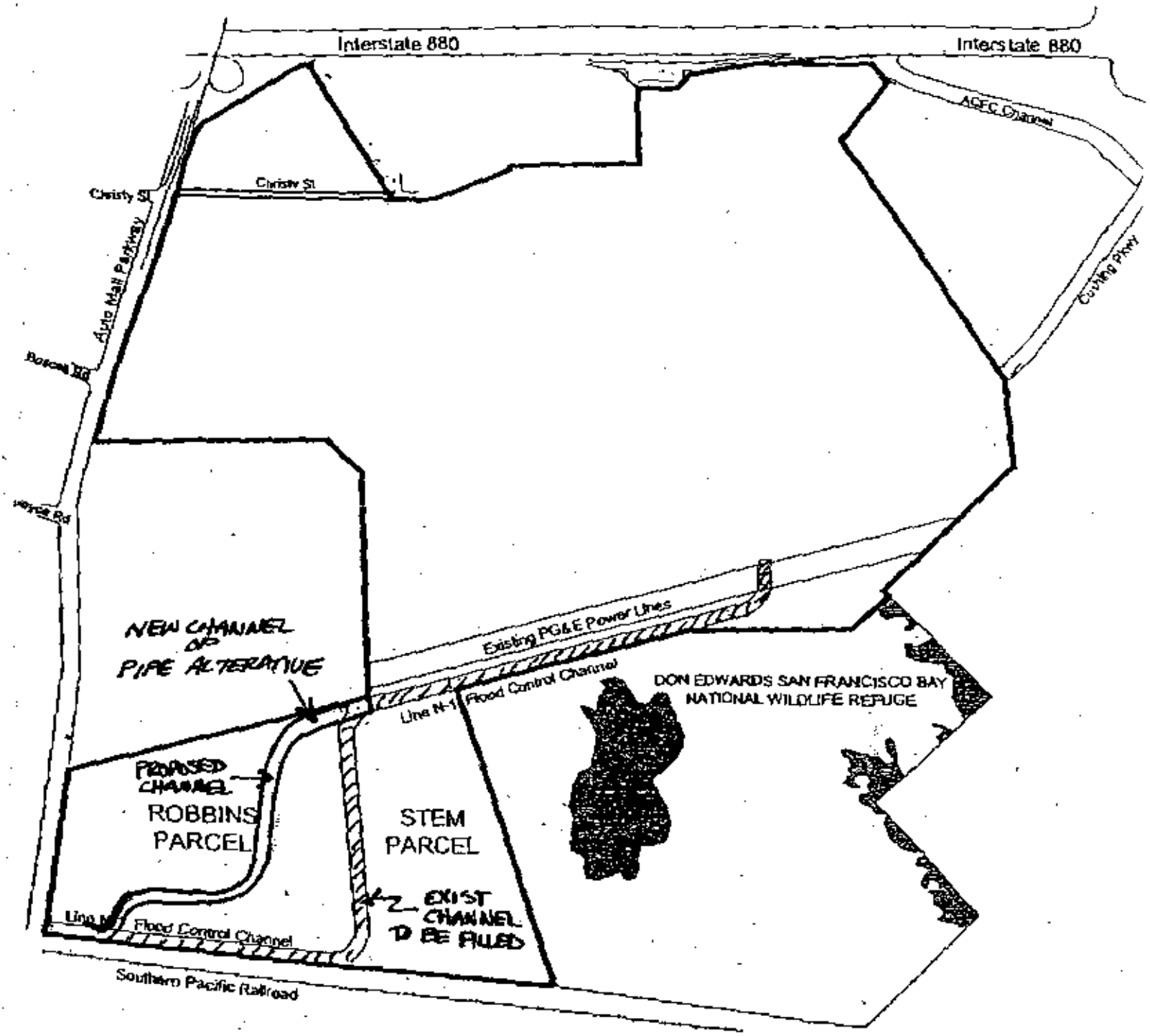
Development of the Project site as proposed would require the filling and realignment of a portion of the N-1 flood control channel for preserve area restoration and storm water drainage purposes (see **Figure 22**).

Impact 6-2: Development of the Project site as proposed would result in the modification of existing storm water drainage facilities. The N-1 line was designed and located to drain the entire Project area, including property along Christy Street not owned by the Project proponent. The 391-acre preserve area will not be served by the N-1 line. Relocation of the N-1 line would remove a barrier between the two preserve subareas and is regarded as an environmental benefit. Final design of the relocated line must be coordinated with retention pond, city park and transit facility/train station design to avoid impact on those facilities.

Mitigation Measures

Mitigation 6-2: Prior to any modifications to Line N-1, the Project developer shall design the relocated N-1 line to ensure the long-term maintenance and safety of the modified drainage channel, and the overall effects of the proposed filling/realignment on flood control within the watershed to the satisfaction of the Alameda County Flood Control and Water Conservation District (ACFCWCD) and the City of Fremont. All on-site drainage facilities must be designed to handle the runoff associated with the 15-year storm design as determined by ACFCWCD, and all drainage plans and calculations shall be submitted to the District for approval. The development of satisfactory drainage plans and the subsequent completion of the necessary on-site drainage improvements would reduce the potential impact to a level of *less than significant*.

Figure 22
PROPOSED MODIFICATIONS TO LINE N-1
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California



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VII. ALTERNATIVES

A. INTRODUCTION

In this chapter, an overview of alternatives which were considered during the Section 404 permit application process is provided, and three alternatives to the Project are described and considered.

Alternative "A", the No Project alternative, is defined as the 1996 project as approved by the City and is required to be evaluated under the provisions of the CEQA. As indicated in the Project History section of the Description of the Project chapter above, development of the Project site as currently approved is not feasible due to Resource Agencies' permitting requirements and conditions intended to provide adequate mitigation for Project-related effects on wetlands and special status species on-site.

Alternative "B", the No Development alternative, represents a scenario that would recognize the existing land uses at the Project site: approximately 1,200,000 square feet of warehouse use on 68 acres and the 45-acre Auto Mall.

Alternative "C", the Incremental Development alternative, assumes that Cushing Parkway would be funded someday, and that some small portions of the Project site not occupied by wetlands would be developed.

B. SECTION 404 EVALUATION CRITERIA AND ALTERNATIVES ANALYSIS OVERVIEW

In 1998, the Project Applicant, the City of Fremont and the Resource Agencies (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game and the Regional Water Quality Control Board) considered a series of alternative development patterns in connection with the application for the Section 404 permit which was submitted to the U.S. Army Corps of Engineers. In addition to a "No Project" (in that case, a "No Development") alternative, and an alternative which ultimately provided the current description of the Project, additional alternatives were considered during the permit application process. These included 11 on-site configurations, 16 off-site alternatives and 6 alternative alignments to the Cushing Parkway extension. The following discussion provides a brief summary of the alternatives analysis conducted during the Section 404 permit proceedings. The complete, detailed analysis of these alternatives is incorporated by reference (see Technical Appendix).

In analyzing alternatives as part of the Section 404 permit application process, the following evaluation criteria were developed:

> Environmental Quality and Resource Protection: Analyzed under this criterion was the extent to which each alternative would achieve the environmental quality and resource protection goals set forth in the Fremont General Plan, in applicable federal, state and local environmental laws, and in discussions during the Resource Agencies' workshops

conducted on the proposed Project. Specific objectives included achieving a net gain of on-site wetlands value and acreage, protecting and enhancing habitat for the federally-protected vernal pool tadpole shrimp and Contra Costa Goldfield plant, and creation of biological connectivity and minimization of "urban edge" between the on-site preserve area, the redevelopment area and the adjoining National Wildlife Refuge to the west.

Emergency Services: Completion of a new fire station within the Project site, and completion of a regional arterial (the Cushing Parkway extension) on the Project site to provide improved access for emergency services providers would meet this criterion.

Transportation: Analyzed under this criterion was the extent to which each alternative would achieve the City's goal of completing the Cushing Parkway extension to improve local circulation , facilitate north/south regional transportation, and to help relieve congestion on the parallel I-880 and its associated feeder streets and interchanges. Those alternatives which would allow for the completion of the Cushing Parkway extension across the Pacific Commons site would meet this criterion.

Jobs-Housing Balance: A major objective of the Fremont General Plan is to reach a point where the number of locally employed residents is equal to the number of local jobs. The City has estimated that 25,000 jobs would be created by the development of the Project site by the year 2020, and any alternative which would attain at least 80 percent of this goal would meet this objective.

Infrastructure Financing: The Project site represents approximately 33 percent of a redevelopment area that was created in 1983 to finance the construction of four nearly-completed I-880 interchanges. Development at Pacific Commons was originally planned to generate approximately $8,000,000 annually in property tax increments to service the existing debt load for these interchange improvements through Fiscal Year 2014/2015. Alternatives which would attain at least 80 percent of this goal would meet this objective.

Fiscal Contribution to City Services: Under California law, cities are heavily reliant upon sales taxes to finance basis and much-needed capital improvements. Conservative revenue estimates indicate that development at Pacific Commons may generate approximately $9,000,000 in annual sales taxes. Any alternative which would generate at least 80 percent of this revenue estimate would meet this objective.

Recreational and Park Amenities: The Fremont General Plan calls for the acquisition and construction of new parks to achieve its objective of providing 5.79 acres of parkland per 1,000 City residents. As a condition of approval for the Project, the Project Applicant was required to provide the City with a 49-acre portion of the Project site known as the "Robbins parcel" at half of its industrial land value for this purpose. The City of Fremont's acquisition and development of the Robbins parcel is dependent on the completion of the Project. Any alternative which would provide at least thirty acres of park lands at Pacific Commons, with acquisition and improvement costs paid by revenues from the completed Project, would meet this objective.

Education and Social Welfare: The City is committed to providing a workforce education center/conference center to provide educational and conference services. Any alternative which would provide for this facility, the acquisition and development of which would be paid by revenues from the completed Project, would meet this objective.

Project Feasibility: The City is not capable of financing these General Plan objectives out of existing revenues, and instead relies upon local development to pay for these improvements and services. Project development would generate revenues to finance these General Plan objectives. An alternative which would make at least 300 acres available for development (including building sites, parking, landscaping and local roads), and which yields at least 80 percent of the 8,300,000 square feet of buildable space that the City approved for this area, would meet the Project feasibility objective.

On-Site Alternatives

The 11 on-site alternatives evaluated (see **Figure 23**) met the overall project purposes in varying degrees, but were deficient on one or more levels.

Alternative B-4 (Southwest Preserve) and Alternative B-5 (Southern Preserve) met most of the Project Applicant's objectives by requiring permanent preservation and restoration of approximately 270 acres while still achieving most of the other General Plan objectives based on the approved density requirements for the Project area. However, even though restoration of the preserves in these alternatives would have, like the proposed Project, resulted in the net on-site increase in wetland acreage and values, not enough habitat would have been preserved in the opinion of the U.S. Fish and Wildlife Service (USFWS) to avoid jeopardy to endangered species at the site.

Two of the on-site alternative configurations with the smallest on-site preserve areas, Alternatives B-1 and B-2, relied in part on re-creation of wetland and habitat acreage at off-site locations, including the nearby Stevenson parcel, and thus failed to meet the objective of providing for a net increase in on-site wetland acreage and habitat values within the Pacific Commons area. Alternative B-3 would have substantially increased the amount of on-site preserve area over these earlier proposals, but would still fail to meet ecological objectives relating to contiguity and urban edge minimization.

Alternative B-6 provided for a preserve area of 279 acres, but would have been ecologically inferior in comparison to the proposed Project because of its high urban edge and other factors. It was also significantly more costly without any corresponding environmental benefits. Alternatives B-7 and B-8 proposed even greater habitat preserves, but were ecologically inferior to the proposed Project.

Alternatives B-9 and B-10 had larger on-site preserve areas than the proposed Project. However, too little developable area was left in either alternative to have made the development feasible.

Alternative B-11 provided for redevelopment that would have avoided all seasonal pools and all endangered species habitat. Cushing Parkway would be relocated westerly to align with existing Nobel Drive. The developable space that would have remained, however, would have been insufficient to make this a feasible alternative, thereby failing to achieve the General Plan objectives. Alternative B-11 comes closest to the No Development alternative discussed below.

Figure 24 summarizes the evaluation of the on-site alternatives conducted during the Section 404 permit application process in 1998.

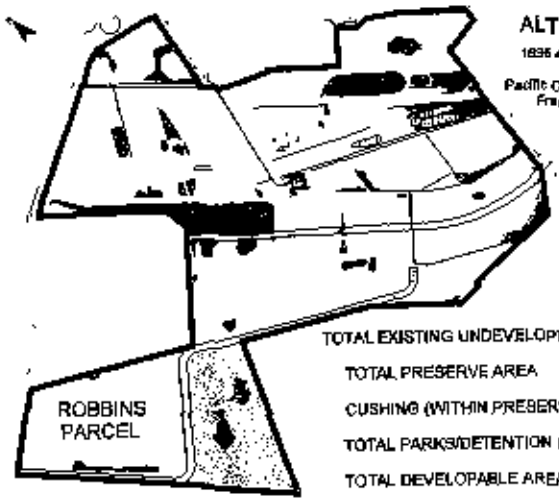
Off-Site Alternatives

Of the 16 off-site alternatives considered, 9 were not located in the City of Fremont, thereby denying the City any opportunity to meet any of its Project objectives. Six of the off-site alternatives were located within the City of Fremont, and one alternative straddled the boundary between the cities of Fremont and Milpitas. These Fremont alternatives were too small, and the potentially developable areas within several were further constrained from full buildout by wetland or special status species. None were viable alternatives to the proposed Project, and none would achieve the inter-related General Plan objectives which are specific to the Pacific Commons area (e.g., construction of a westside fire station, completion of the Cushing Parkway extension for emergency and regional arterial service, and acquisition and development of new recreational areas).

Cushing Parkway Alternative Alignments

Six alternative alignments for Cushing Parkway were evaluated, but none were feasible relative to the proposed alignment from a traffic engineering, project feasibility, and/or environmental resource goals perspective. The alignment included in Alternative B-3 was configured to preserve a large artificial wetland commonly referred to as "Oklahoma" (in reference to its shape) that serves as habitat for the federally-protected vernal pool tadpole shrimp (VPTS). For other reasons, however, this alternative was rejected in the Resource Agencies' workshops. Specifically, the habitat preserves provided for in this alternative were not contiguous with the adjoining National Wildlife Refuge, and would not minimize urban edge ratios.

The second alternative Cushing Parkway alignment was included in Alternative B-10, and would connect with Auto Mall Parkway on the western boundary of the Auto Mall, configured so as to avoid all wetlands and endangered species habitat. Due to its convoluted alignment, its utility as an alternative route to the congested I-880 freeway would have been substantially diminished. Moreover, Alternative B-10 failed the overall Project purpose, since it would not allow sufficient developable space to generate the revenues needed to finance the Cushing Parkway extension and the other General Plan objectives.



ALTERNATIVE B-1

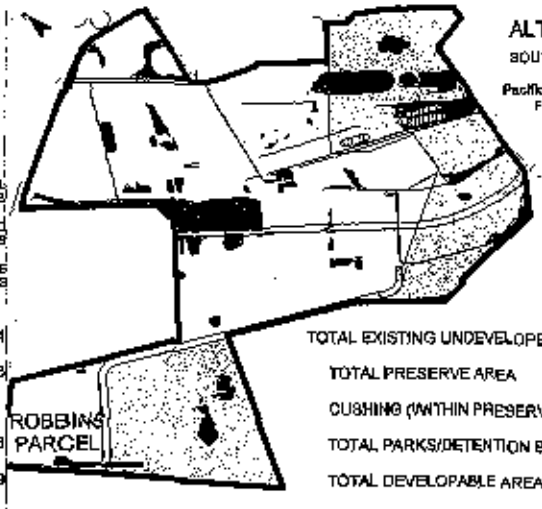
1635 404 APPLICATION

Pacific Commons Project Site
Fremont, California

LEGEND

- SEASONAL WETLANDS
- GOLDFIELD POPULATIONS
- PRESERVE AREAS

TOTAL EXISTING UNDEVELOPED AREA	74
TOTAL PRESERVE AREA	8
CUSHING (WITHIN PRESERVE)	
TOTAL PARKS/DETENTION BASIN	8
TOTAL DEVELOPABLE AREA	58



ALTERNATIVE B-4

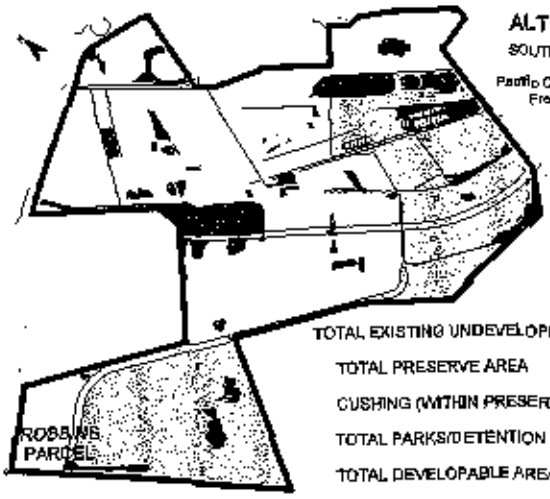
SOUTHWEST PRESERVE

Pacific Commons Project Site
Fremont, California

LEGEND

- SEASONAL WETLANDS
- GOLDFIELD POPULATIONS
- PRESERVE AREAS

TOTAL EXISTING UNDEVELOPED AREA	746
TOTAL PRESERVE AREA	272
CUSHING (WITHIN PRESERVE)	5
TOTAL PARKS/DETENTION BASIN	44
TOTAL DEVELOPABLE AREA	425



ALTERNATIVE B-

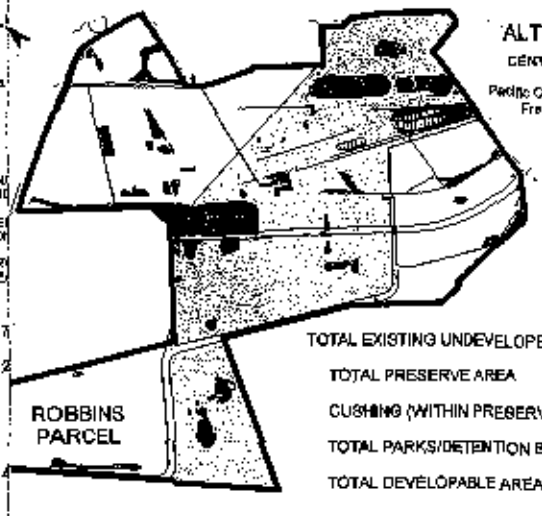
SOUTHERN PRESERVE

Pacific Commons Project Site
Fremont, California

LEGEND

- SEASONAL WETLANDS
- GOLDFIELD POPULATIONS
- PRESERVE AREAS

TOTAL EXISTING UNDEVELOPED AREA	7
TOTAL PRESERVE AREA	2
CUSHING (WITHIN PRESERVE)	
TOTAL PARKS/DETENTION BASIN	
TOTAL DEVELOPABLE AREA	4



ALTERNATIVE B-6

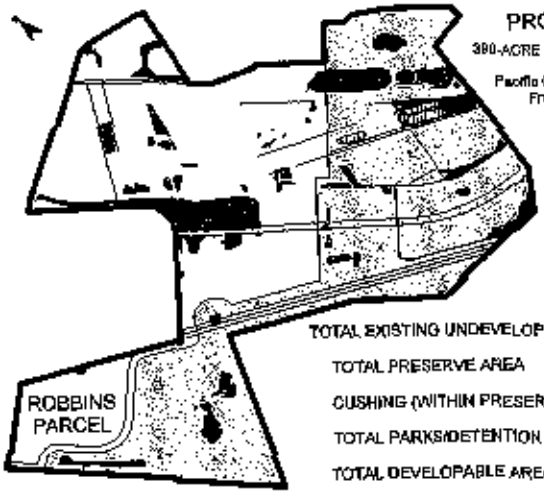
CENTRAL PRESERVE

Pacific Commons Project Site
Fremont, California

LEGEND

- SEASONAL WETLANDS
- GOLDFIELD POPULATIONS
- PRESERVE AREAS

TOTAL EXISTING UNDEVELOPED AREA	746
TOTAL PRESERVE AREA	339
CUSHING (WITHIN PRESERVE)	8
TOTAL PARKS/DETENTION BASIN	87
TOTAL DEVELOPABLE AREA	312



PROPOSED PR

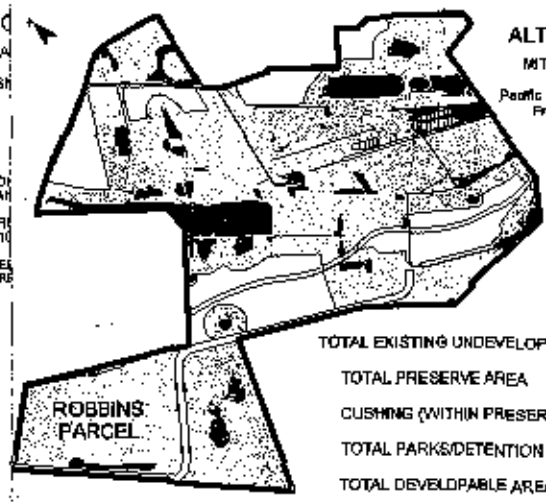
390-ACRE REFUGE ALTERNA

Pacific Commons Project Si
Fremont, California

LEGEND

- SEASO WETLA
- GOLDF POPULATI
- PRESE ARE

TOTAL EXISTING UNDEVELOPED AREA	
TOTAL PRESERVE AREA	
CUSHING (WITHIN PRESERVE)	
TOTAL PARKS/DETENTION BASIN	
TOTAL DEVELOPABLE AREA	



ALTERNATIVE B-11

MITIGATION BANK C

Pacific Commons Project Site
Fremont, California

LEGEND

- SEASONAL WETLANDS
- GOLDFIELD POPULATIONS
- PRESERVE AREAS

TOTAL EXISTING UNDEVELOPED AREA	746
TOTAL PRESERVE AREA	635
CUSHING (WITHIN PRESERVE)	1
TOTAL PARKS/DETENTION BASIN	0
TOTAL DEVELOPABLE AREA	110

Figure 24
ON-SITE ALTERNATIVES SUMMARY
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

	Onsite Alternatives	Natural Resources					Emergency Services		Traffic		Fiscal Yields				
		Significant Net Onsite Increase in Wetlands	Avoid Contra Costa Gold-fields	Significant Net Onsite Increase in VPTS Habitat	Biological Connectivity of All Preserve Area(s) to Refuge	Avoidance of Jeopardy to Endangered Species	Meet Five-Minute Emergency Response Standard	Alternate Evacuation Route for I-880 Emergency	Meet Regional Arterial Needs	Jobs-Housing Balance	Infra-Structure Financing Commitments	Annual Funding for City Services	Recreational Park (Siting & Funding)	Education & Social Welfare (Siting & Funding)	Overall Project Feasibility
	Proposed Project	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
1	1996 404 Application	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Goldfields/Refuge Expansion Preserve	No	Yes	No	No	No	Yes	Yes	Yes	≥80%; Partial	≥80%; Partial	≥80%; Partial	Yes	Yes	Yes
3	1997 404 Co-Application	Yes	Yes	Yes	No	No	Yes	Yes	Yes	≥80%; Partial	≥80%; Partial	≥80%; Partial	≥30 ac; Partial	Partial	Yes
4	Southwest Preserve	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	≥80%; Partial	≥80%; Partial	≥80%; Partial	≥30 ac; Partial	Partial	Yes
5	Southern Preserve	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	≥80%; Partial	≥80%; Partial	≥80%; Partial	≥30 ac; Partial	Partial	Yes
6	Development Plateau	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No	No
7	Southcentral Pres.	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No	No	No	No
8	Central Preserve	Yes	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No
9	Mitigaiton Bank A	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No	No	No
10	Mitigation Bank B	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No	No	No
11	Mitigation Bank C	No	Yes	No	No	Yes	No	No	No	No	No	No	No	No	No
	No Project	No	Yes	No	N/A	No	No	No	No	No	No	No	No	No	No

Yes/Partial= Achieves the project purpose component *and* is practicable.
No = Does not achieve the project purpose component *and/or* is not practicable.

The other four Cushing Parkway alignment alternatives were identified by staff of the resource Agencies during their workshops and meetings. Labeled the Frontage Road (D-1), Northport Loop (D-2), Flood Channel (D-3) and Wishbone (D-4) alternatives, none was feasible or practicable. All four would have required the destruction of large existing buildings occupied by high technology companies or other industrial tenants, and one (Alternative D-2) would additionally have required elevating the roadway up to fifty feet over the flood channel at considerable cost. None of these four alternate alignments would meet requisite traffic flow and safety requirements. By the year 2010, approximately 32,000 vehicles per day would be expected to use this roadway. All four of these alignments would have required access through the highly developed "Northport Loop" area, and bringing that many vehicles through these alignments would have created unacceptable safety and traffic management problems due to the close turning motions and proximity to existing signalized intersections.

C. ALTERNATIVE "A" - NO PROJECT

Alternative "A", the No Project alternative, represents the level of development which would be expected to take place as approved in the 1996 Planned District. As discussed previously, the ability to gain Resource Agencies' approval is very unlikely, making this alternative infeasible.

D. ALTERNATIVE "B" - NO DEVELOPMENT

Alternative "B", the No Development alternative, evaluates the environmental impacts associated with allowing the Project site to remain in its current state. Alternative "B" reflects existing development on approximately 68 acres of the Pacific Commons property not analyzed in this Supplemental EIR and the completion of the Auto Mall on approximately 45 acres. This alternative would result in no new development and no extension of Cushing Parkway.

Planning and Policy Context

Under Alternative "B", it may be possible for the Project site to remain undeveloped in the future, but this would be inconsistent with the General Plan, and would not achieve many City objectives (i.e., the completion of the Cushing Parkway extension, improvement in the local jobs/housing balance, revenue enhancement, etc.).

Traffic and Circulation

No new traffic would be generated under Alternative "B". In the absence of development at the Project site, it would be unlikely that the City would be able to complete Cushing Parkway (one of the last remaining segments of a regional north-south arterial roadway parallel to I-880), which could exacerbate circulation and emergency response problems in areas west of the freeway. Even in the absence of development at the Project site, the Auto Mall Parkway/I-880 northbound off/on ramps would operate at LOS "E" during the AM peak hour, and at LOS "F" during the PM peak hour. With no development at the Project site, there would be no increase in transit demand and no need for any additional road maintenance.

Visual and Aesthetic Resources

Under Alternative "B", the existing visual character of the Project site would be maintained, and views of the Fremont Hills and San Francisco Bay would be preserved.

Other Environmental Considerations

No existing wetlands at the Project site would be directly impacted under Alternative "B". However, this alternative would not result in the restoration of wetlands or in the creation of any new wetlands, and existing vernal pool tadpole shrimp and Contra Costa goldfields habitat at the Project site would be left to further degrade, due to the continuing invasion of non-native grasses.

Any unidentified archaeological resources which may exist at the Project site would remain undisturbed under Alternative "B".

With no development at the Project site, Alternative "B" would not expose anyone at the Project site to any geotechnical hazards.

Under Alternative "B", businesses and industries involved in the transportation, storage and use of hazardous/toxic materials would not locate at the Project site, and no on-site workers would be exposed to potential off-site releases of hazardous/toxic substances from areas near the Project site. On-site risks to human health related to spills or accidental releases or other contaminating events involving hazardous/toxic materials would be eliminated under this alternative.

Under Alternative "B", on-site ponding of stormwater runoff would continue. The existing Line N-1 would provide some relief from flooding, but this line could not be fully utilized without minor on-site drainage improvements. Allowing the Project site to remain in its current state would contribute fewer contaminants to stormwater runoff in comparison to the proposed Project, while any risks associated with the accidental spills of toxic and hazardous materials which might be used at the Project site if developed as proposed would be eliminated.

There would be no significant noise impacts associated with Alternative "B".

E. ALTERNATIVE "C" - INCREMENTAL DEVELOPMENT

This alternative assumes that Cushing Parkway would be funded someday (e.g., by the City, developer or a combination of the two) either in the proposed location or westerly to align with the existing Nobel Drive. Alternative "C" also assumes that some small portions of the Project site not occupied by wetlands would be developed. If existing habitat disappears because of lack of water or encroachment by invasive plant species that displace the wetland vegetation, additional land might be developed. This pattern of development, which might be called an incremental, phased development, is similar to Alternative B-11 shown in **Figure 23**.

Planning and Policy Context

Under Alternative "C", incremental development would not meet the objective of timely development of Cushing Parkway or lead to an efficient, orderly development of industrial uses in the area.

Traffic and Circulation

Under Alternative "C", the Cushing Parkway extension may be constructed, but may not be attractive as a route serving the westerly side of I-880.

Visual and Aesthetic Resources

Under Alternative "C", the visual character of the Project site would be altered, but not to the extent associated with the proposed Project.

Other Environmental Considerations

Development of lands adjacent to existing wetlands could have adverse impacts on remaining wetland areas at the Project site under Alternative "C"...

Any unidentified archaeological resources which may exist at the Project site would be more likely to remain undisturbed under Alternative "B" than under Alternative "C".

With limited, incremental development at the Project site, Alternative "C" would expose fewer people at the Project site to any geotechnical hazards relative to the proposed Project.

Under Alternative "C", few businesses and industries involved in the transportation, storage and use of hazardous/toxic materials would be expected to locate at the Project site. A limited number of on-site workers would be exposed to potential off-site releases of hazardous/toxic substances from areas near the Project site. On-site risks to human health related to spills or accidental releases or other contaminating events involving hazardous/toxic materials would be limited, due to the limited development anticipated under this alternative.

Under Alternative "C", on-site ponding of stormwater runoff would continue. The existing Line N-1 would provide some relief from flooding, but this line could not be fully utilized without minor on-site drainage improvements. Limited incremental development at the Project site would contribute fewer contaminants to stormwater runoff in comparison to the proposed Project, while any risks associated with the accidental spills of toxic and hazardous materials which might be used at the Project site if developed as proposed would be reduced.

There would be fewer significant noise impacts associated with Alternative "C", relative to the proposed Project.

F. EVALUATION OF ALTERNATIVES

In evaluating alternatives for the purpose of identifying the "environmentally superior alternative" as required by CEQA, different people may assign different weights to the relative importance of specific environmental impacts. For example, some might "give more weight" to potential effects related to biological resources than to traffic-related impacts, while others may feel that traffic-related impacts should "carry more weight" in the analysis than other effects (i.e., impacts on biological resources, air quality and noise impacts, etc.). In comparing the project and the alternatives for this analysis, no specific type of environmental impact was given more weight than any other type of environmental impact. In each environmental impact category, the Project as currently proposed and each of the three alternatives are rated on a scale of 1 to 4, with 1 representing the least, or fewest adverse potential environmental impacts in a particular category relative to the other alternatives, and 4 representing the greatest, or most adverse potential environmental impacts in that same category relative to the other alternatives. Using this scoring system, the alternative with the lowest score would be identified as the "environmentally superior" alternative. It should be noted that in some instances, the differences in the level of impact between the alternatives may be slight, and that Alternative "A" has been identified as infeasible, due to an inability to provide adequate protection for wetlands and habitat areas.

Figure 25
COMPARISON OF THE PROJECT AND ALTERNATIVES
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

		Alternatives		
	Project	A	B	C
Planning and Policy Context	2	1	4	3
Traffic and Circulation*	3	4	1	2
Visual and Aesthetic Resources	4	3	1	2
Air Quality	3	4	1	2
Biological Resources**	1	4	2	3
Cultural Resources	3	4	1	2
Geology/Soils	3	4	1	2
Hazards and Hazardous Materials	3	4	1	2
Hydrology/Water Quality	3	4	1	2
Noise	3	4	1	2
Total Score	28	36	14	22

* It should be noted that while Alternative "B" (the No Development alternative) would not provide for the completion of Cushing Parkway, it would add no new traffic to the existing roadway network.

** It should be noted that in the absence of any effort to preserve existing wetlands and habitats at the Project site, Alternative "B" (the No Development alternative) could result in the ultimate loss of existing wetlands and habitats at the Project site over time, even though it would not result in any disruption of the existing wetlands and habitats at the Project site.

Of the four variants evaluated (the proposed Project and the three alternatives), Alternative "B" (the No Development alternative) would involve the fewest significant environmental impacts. With no construction at the Project site, the existing environment would remain largely undisturbed under the No Development alternative, and there would be no construction-related environmental effects (i.e., dust, equipment exhaust, noise, erosion) and no additional vehicles moving to or from the Project site along the local roadway network contributing to traffic congestion or air pollution. The visual character of the Project site would remain unchanged under Alternative "B", and the lack of development would eliminate the potential risk of exposure to geotechnical hazards associated with occupied structures which might otherwise be built at the Project site. There would be no increase in the risk of exposure to hazardous materials under Alternative "B", and existing drainage patterns at the Project site would remain intact.

Based on the evaluation of possible environmental impacts alone, Alternative "B" would be considered to be the "environmentally superior" alternative. However, while this alternative would leave existing on-site vegetation and wildlife undisturbed, it would ultimately result in continued degradation of on-site habitat for the Contra Costa goldfields and the vernal pool tadpole shrimp. Alternative "B" would be inconsistent with the Fremont General Plan (which calls for the eventual development of the Project site), and would meet none of the development goals or objectives of the Project proponent or of the City. In addition, the "No Development" alternative would not provide an opportunity to complete Cushing Parkway, which would exacerbate existing problems with circulation and emergency response west of I-880. While the "No Development" alternative is identified as the "environmentally superior" alternative here, the limitations of this alternative in terms of meeting the goals and objectives of the City of Fremont and the Project applicant point to the need to balance the environmental effects of the proposed Project and the other alternatives with the long-term environmental and economic benefits which may ultimately be realized through development of the Project site.

VIII. OVERVIEW OF EVALUATION

In this Chapter, the effects of the Project are examined under three general categories from which some of the overall salient conclusions of the evaluation can be derived.

A. UNAVOIDABLE ADVERSE EFFECTS/ IRREVERSIBLE ENVIRONMENTAL CHANGES

The following adverse effects appear to be unavoidable if the Project, as identified in this document, is implemented. Each effect has its own varying degree of impact. These assessments of impacts assume that identified feasible mitigation measures under the control of the Project developer will be implemented. Other measures that would further mitigate these effects have been identified as being within the jurisdiction of public agencies or other private entities, and therefore are not within the direct control of the developer.

- Project development would result in ***significant, unmitigable traffic impacts*** at the following intersections and roadway segments:
  - I-880 SB Off-Ramp/Auto Mall Parkway (this Project-related impact was also identified in the 1996 Supplemental EIR);
  - Grimmer/Auto Mall Parkway (this Project-related impact was also identified in the 1996 Supplemental EIR);
  - I-880 SB between Stevenson and Auto Mall Parkway (this Project-related impact was also identified in the 1996 Supplemental EIR); and
  - I-680 SB between Washington and Auto Mall Parkway (this Project-related impact was also identified in the 1996 Supplemental EIR).
- As indicated in the previous Supplemental EIR (Ref. 10, May 1, 1996), the Project would have a ***significant, unmitigable adverse impact*** on regional air quality, and would contribute to the continuing ozone problem in the region.
- As indicated in the previous Supplemental EIR (Ref. 10, May 1, 1996), development of the Project site would expose a larger number of people to geologic and seismic hazards. The degree of hazard would depend to some extent on the nature of the site development. The greater the density of development on the site, the larger the number of people likely to be exposed to seismic hazards. Increased exposure to seismic impacts represents a ***potentially significant, unmitigable environmental impact.***

- Irreversible environmental changes would include:

  - Consumption of construction materials.
  - A change in the drainage pattern in the vicinity of the Project site.
  - Improved vehicular access to the Project site and surrounding, largely undeveloped areas.
  - A change in the visual character of the Project site.
  - Increased daytime glare and nighttime lighting resulting from the development of large structures at the Project site.

B. GROWTH-INDUCING IMPACTS

The proposed Project may have growth-inducing impacts on the entire Fremont Industrial Redevelopment Area. Although most of the land west of the Nimitz Freeway (I-880) and in the vicinity of the Project site is already developed, the proposed Project could induce some additional industrial development in the surrounding areas, in accordance with the General Plan.

The proposed Project may also have growth-inducing effects at a citywide level. To some extent, the nature of these effects would depend on the phasing of development at the Project site. New commercial and industrial uses on the site could generate a demand for housing elsewhere in the City. Project development (particularly the creation of an estimated 25,000 new jobs) would be likely to increase the citywide demand for retail commercial uses and other services, especially those not available on the Project site.

It should be noted, however, that the creation of an estimated 25,000 new jobs at the Project site would also make a significant contribution toward the goal of achieving a balance between local jobs and housing in Fremont, and that this level of economic development would provide financial resources to fund the construction of local transportation improvements.

C. CUMULATIVE IMPACTS

Cumulative impacts are defined as two or more separate impacts which, when considered together, are considerable, or which compound or increase other environmental impacts (CEQA Guidelines, Section 15355). Cumulative impacts can result from individually minor (but collectively significant) projects taking place over time in different (but spatially related) locations.

The analysis of traffic impacts in this Supplemental EIR provides quantified estimates of cumulative impacts associated with the proposed Project, combined with future development in the surrounding area. These estimates are based on a series of assumptions regarding the type and intensity of various land uses at build-out of the City's existing General Plan. The assumptions have been incorporated in the City's traffic model (see discussion in Appendix C), which in turn has provided much of the basic data for this Supplemental EIR.

Potential cumulative impacts resulting from the proposed Project may be summarized as follows:

- The effects of the Project, with particular respect to traffic, drainage and wastewater, may combine with those resulting from other urbanization and growth in the City to produce still larger impacts. Since the Project and other anticipated development would occur over time, these impacts are not likely to emerge suddenly, and the pace of anticipated cumulative development may enable appropriate and effective mitigation measures to be implemented.

- The Project would produce a number of increased demands on the public service sector, including fire, police and emergency services. Each of these impacts individually is relatively minor. In aggregate, however, the cumulative effect may be considerable. This impact cannot be rated as highly significant or adverse, however. It may be offset or mitigated by requirements placed upon the Project applicant in the form of development fees or required infrastructure improvements, or by revenues generated by the Project in the form of taxes benefitting local service-providing agencies.

- Cumulative development in the City can be expected to result in additional degradation of the noise environment, air quality and water quality.

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IX. PARTICIPANTS AND REFERENCES

A. SUPPLEMENTAL EIR AUTHORS

This Supplemental EIR was prepared for the City of Fremont by the firm of **Duncan & Jones**, Urban and Environmental Planning Consultants, in affiliation with **Lamphier & Associates**, Urban Planning - Environmental Analysis.

DUNCAN & JONES, Urban and Environmental Planning Consultants
Douglas H.S. Duncan, Principal (Project Manager)

LAMPHIER & ASSOCIATES, Urban Planning - Environmental Analysis
Joan Lamphier. Principal
John Courtney, Associate Planner
Andrew Young, Associate Planner

B. ORGANIZATIONS AND PERSONS CONTACTED

City of Fremont

Len Banda, Senior Planner, Development and Environmental Services Department
Martin Boyle, Engineering Department
Kunle Odumade, Engineering Department
Susan Aro, Business Manager, Fremont Police Department
Penny Starr, Business Manager, Fremont Fire Department
Dennis Sparacino, Recreation Department

Alameda County Flood Control and Water Conservation District

John Nguyen

Alameda County Water District

Gary McGee

San Joaquin Regional Rail Commission, Altamont Commuter Express

Stacey Mortensen

Browning-Ferris Industries (BFI)

Scott Morey, Site Manager

TJKM Transportation Consultants

Chris Kinzel, Principal

Ken Kay Associates, Landscape Architecture - Urban Design - Environmental Planning

Joseph DeCredico
Craig Heckman

Beveridge and Diamond LLP

Jennifer Hernandez
Elizabeth Lake
Laurence Chaset

C. REFERENCES

1. Bay Area Air Quality Management District, BAAQMD CEQA Guidelines, April 1996.

2. Catellus Development Corporation, Pacific Commons - Planned District Development Standards and Guidelines, October, 1996.

3. City of Fremont, Fremont General Plan, Adopted May, 7, 1991, with amendments through September 10, 1996.

4. City of Fremont, Draft Environmental Impact Report - Santa Fe Pacific Realty Project General Plan Amendment, EIR #86-85, State Clearinghouse #8721715 (prepared by Duncan & Jones), November 24, 1987.

5. City of Fremont, Final Environmental Impact Report - Santa Fe Pacific Realty Project General Plan Amendment, EIR #86-85, State Clearinghouse #8721715 (prepared by Duncan & Jones), January 22, 1988.

6. City of Fremont, Draft Supplemental Environmental Impact Report - Santa Fe Pacific Realty Project General Plan Amendment, EIR #86-85, State Clearinghouse #8721715 (prepared by Duncan & Jones), December 12, 1988.

7. City of Fremont, Final Supplemental Environmental Impact Report - Santa Fe Pacific Realty Project General Plan Amendment, EIR #86-85, State Clearinghouse #8721715 (prepared by Duncan & Jones), February 24, 1989.

8. City of Fremont, Draft Environmental Analysis - Catellus Development Corp. Revised Fremont Shores Project, Special Study Application 90-6 (prepared by Duncan & Jones), March 13, 1991.

9. City of Fremont, Addendum to the Environmental Impact Report - Pacific Greens Project Catellus Development Corp. (Former Fremont Shores Project - Santa Fe Pacific Realty Corporation), State Clearinghouse #8721715, Special Study Application 90-6 (prepared by Duncan & Jones), August 12, 1991.

10. City of Fremont, Draft Supplemental Environmental Impact Report - Pacific Commons Project Catellus Development Corp., State Clearinghouse #8721715, General Plan Amendment and Planned District Rezoning (prepared by Duncan & Jones), May 1, 1996.

11. City of Fremont, Final Supplemental Environmental Impact Report - Pacific Commons Project Catellus Development Corp., State Clearinghouse #8721715 & 96052016, General Plan Amendment and Planned District Rezoning (prepared by Duncan & Jones), July 26, 1996.

12. City of Fremont and Catellus Development Corporation, Section 404 Permit Application "Alternatives Analysis" for the Pacific Commons Project in the Industrial Redevelopment Area of Fremont, California, September, 1998.

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APPENDIX A

NOTICE OF PREPARATION AND RESPONSES TO NOTICE OF PREPARATION

CITY OF FREMONT
DEVELOPMENT AND ENVIRONMENTAL SERVICES DEPARTMENT

NOTICE OF PREPARATION OF A SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR THE PACIFIC COMMONS PROJECT

The City of Fremont will be the Lead Agency and will prepare a Supplemental Environmental Impact Report for the Pacific Commons Project ("SEIR"). We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the SEIR prepared by our agency when considering your permit or other approval for the project.

Project Title: Pacific Commons Project SEIR Previous State Clearinghouse No. 8721715

Project Applicant: Catellus Development Corporation ("Catellus")

Project Location: The Pacific Commons Project is located on approximately 768 acres within the City of Fremont in Alameda County, California. It is bounded generally by the Nimitz Freeway (Interstate 880) to the east, Auto Mall Parkway to the north, the existing Cushing Parkway terminus to the south, and the Southern Pacific Railroad right-of-way and the San Francisco Bay National Wildlife Refuge to the west.

Project History: In September 1996, the City approved a General Plan amendment, a Planning District zoning ordinance, a vesting tentative map, and a revised Development Agreement for the Pacific Commons Project based on a 1996 Supplemental Environmental Impact Report. That 1996 Supplemental Environmental Impact Report and Development Agreement included numerous mitigation measures and conditions of approval, including requirements to survey for special status plant and animal species and develop an appropriate Mitigation Plan, and to obtain permits for wetlands and species impacts from the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the California Department of Fish and Game (collectively, "Resource Agencies"). In 1997, the City of Fremont joined Catellus as a co-applicant for the Resource Agencies' permits, in 1998, the City approved the Mitigation Plan submitted by Catellus, and in 1999, the City and Catellus received all Resource Agency permits.

Project Description: The Project Applicant proposes to incorporate and implement the mitigation measures and conditions of approval (specifically, the Mitigation Plan and Resource Agencies' permit requirements) into the approved 1996 development plan. Implementation of these measures will result in a reduced development footprint with increased development density, increased preserve areas and elevation of Cushing Parkway. More specifically, implementation of the measures include: designating approximately 305 acres of "developable area" for construction of the approximately 8.3 million square foot business park, setting aside 49 acres on-site for development of a City recreational sports park that would include ball fields and visitor facilities (a portion of which would incorporate a detention and retention basins to manage storm water flows from the adjoining business park), preserving 391 acres on-site for restoration of a habitat that would be contiguous with and donated to the adjoining Don Edwards San

CITY OF FREMONT

DEVELOPMENT AND ENVIRONMENTAL SERVICES DEPARTMENT

Francisco Bay National Wildlife Refuge, restoring and donating to the Refuge the near-by 53-acre Stevenson Parcel and 20-acre Onorato Parcel for wetlands and species preservation, restoring and donating a 840-acre off-site easement for California tiger salamander habitat preservation in accordance with the Department of Fish and Game existing approvals, filling and realigning a portion of the N-1 Alameda County flood control channel for preserve area restoration and storm water drainage purposes, and completing the Cushing Parkway across the project site (including an elevated roadway design across the preserve area).

Project Purpose: To implement the Mitigation Plan and Resource Agency permit conditions pertaining to wetlands and species preservation, restoration and enhancement, while preserving the development-related objectives (including job creation, revenue generation, circulation, and emergency vehicle response) of the Pacific Commons Project as approved by the City in September 1996.

Probable Environmental Effects: Because changes to the Project since 1996 involve the integration and implementation of mitigation measures and other conditions of approval which are designed to provide additional environmental benefits, the potential environmental effects of the proposed project are limited to related traffic impacts and impacts related to taller buildings(views, glare,shadows, wind tunnel effects etc).

Two maps are attached for reference. The first is a vicinity map showing the three subject sites and surrounding area. The second map shows the project area and preserve. The area labeled project site will be developed with a mixture of the office park complex, the area labeled Robbins Parcel will be developed as City Park and retention/detention basin. The area labeled Preserve is the 391 acre area to be restored as a wetland/upland habitat to be donated to the San Francisco Bay Wildlife Refuge.
Due to time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to the contact person listed below. We will need the name for a contact person in your agency.

Date of Notice: November 19, 1999

Signature: Lan Banda

Title: Senior Planner
City of Fremont Planning Division
Telephone: (510) 494-4474
Email:lbanda@ci.fremont.ca.us

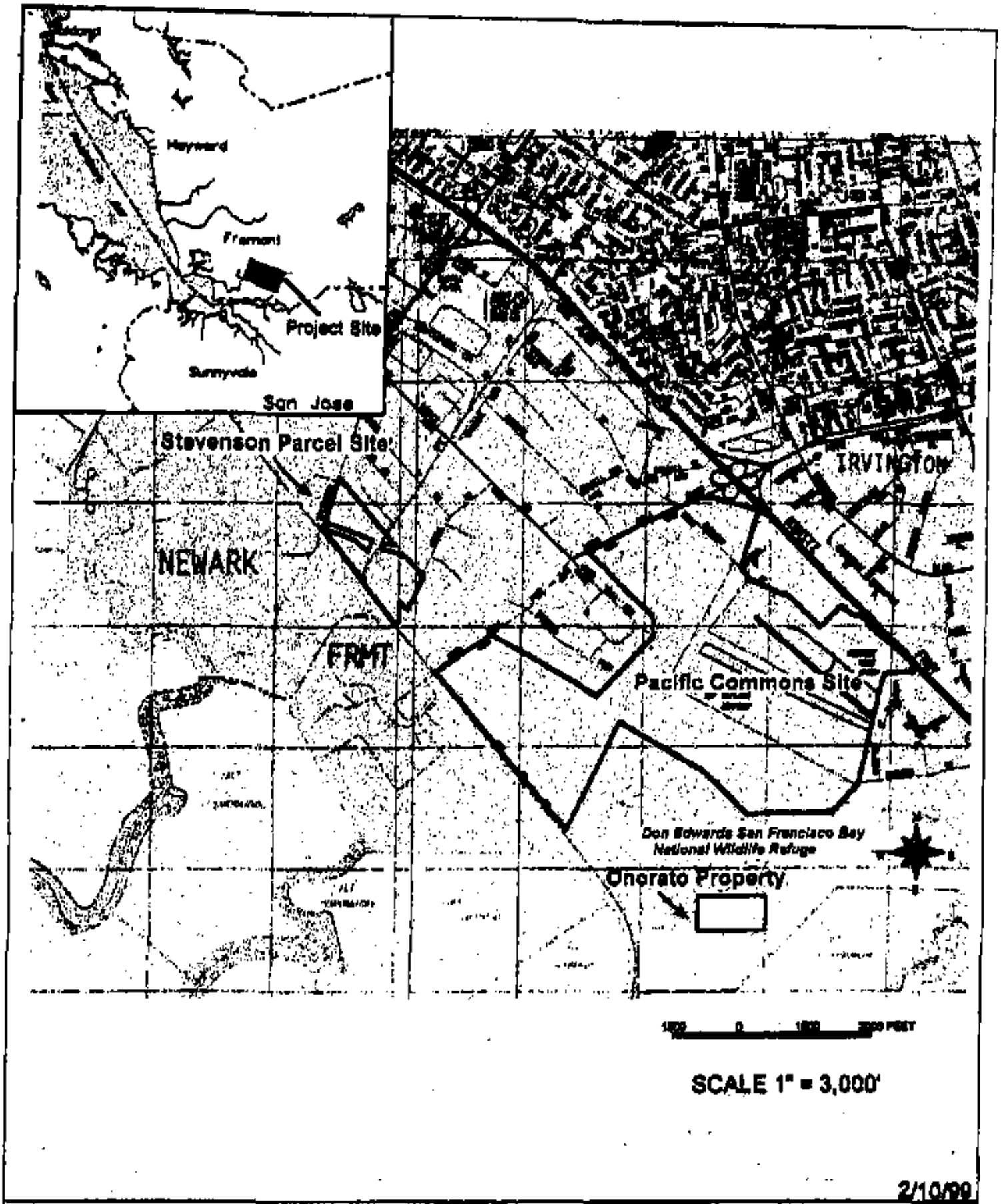
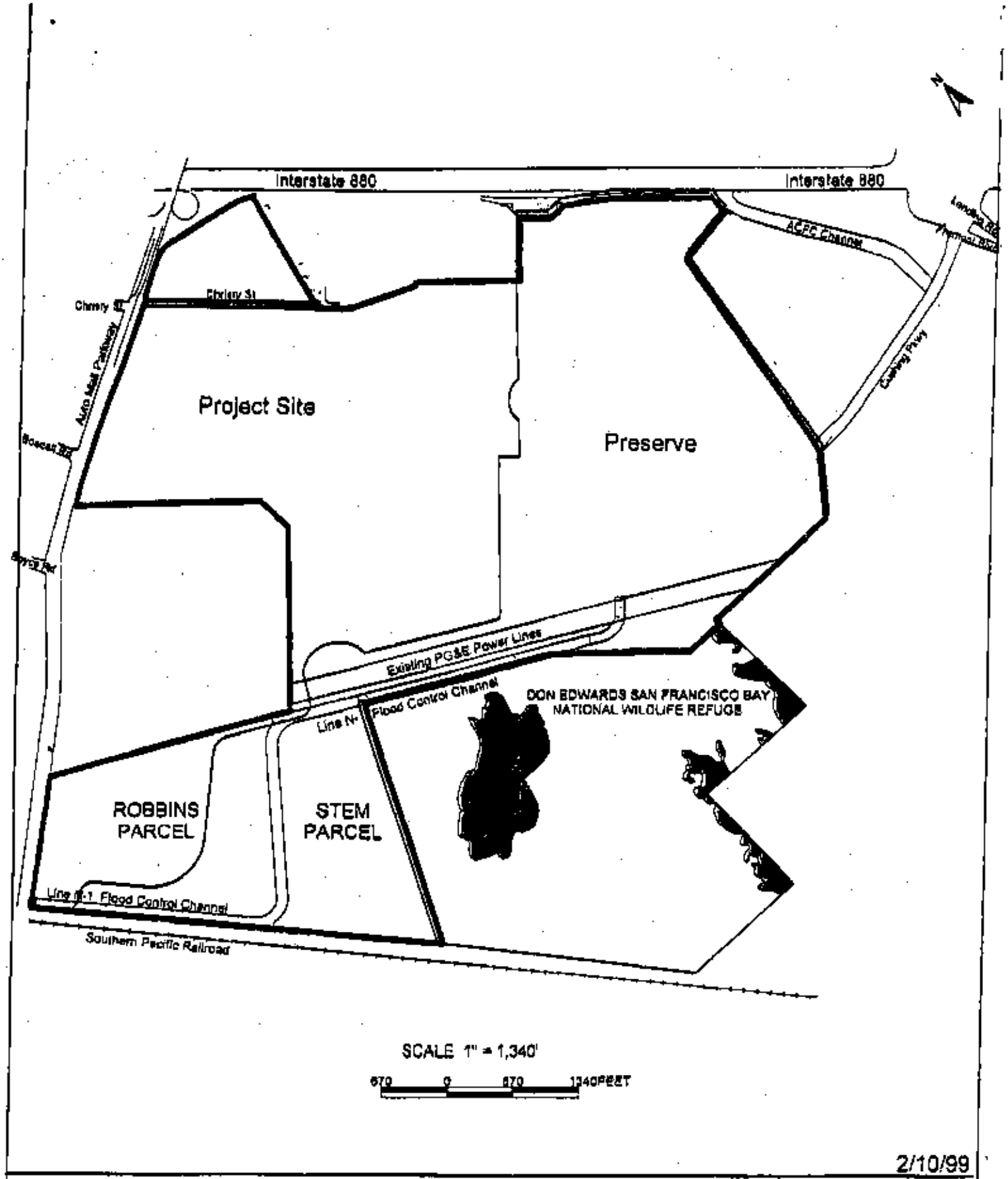


Figure 1. Project Site vicinity map



2/10/99

Figure 2. Project Site map

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Tri-City Ecology Center

P.O. Box 674, Fremont, CA 94537 510-793-6222

Len Banda
Development and Environmental Services Department
City of Fremont
P.O. Box 5006
Fremont, CA 94537

December 9, 1999

Re:NOP of Supplemental Environmental Impact Report for Pacific Commons Project

Dear Len,

Thank you for the opportunity to comment on the development-related aspects of the Pacific Commons project. In order to mitigate the effects of this planned district development, we recommend the following:

(1) Increased traffic congestion is a serious concern; public transit is a necessity. It is important to work with AC transit to design workable bus routes and a transit hub, and with ACE and Capitol Corridor trains to insure convenient commuter access.

(2) One of our goals with relation to this project is the adoption and implementation of energy efficiency standards that exceed those of the State of California. Building design, orientation, state of the art lighting technology all must be an integral part of the Planned District Guidelines. We recommend considering PG&E's "Saving by Design" program.

(3) Discussions of the proposed buildings have included various terms such as "midrise" and "taller"; "high intensity" and "lower density". A clarification of terms and concepts might be helpful. In general, a mixture of heights and uses means a vital, healthy, self-contained (thus reducing traffic impacts to I880) area. View corridors may be needed to ameliorate the high-density, tall-building portion of the development. Parks and plazas also offer breathing room.

(4) We encourage pedestrian and bicycle trails throughout the devlopment, usable for both transit and recreation.

(5) Because the project is adjacent to the Don Edwards San Francisco Bay National Wildlife Refuge, it is important to insure that everything possible is done to keep all toxics from entering the waterways that lead to the bay. The Clean Water Program guide-lines must be carefully followed.

(6) The district should be recycling-friendly. Buildings must be designed for the convenience of both the consumer and company that collects the recyclables.

The ecology center looks forward to watching Pacific Commons become a landmark "green" development. Our comments probably exceed what is required for this document, but we are enthusiastic about the possibilities.

We look forward to hearing from you on this matter.

Sincerely,

Donna Olsen

Donna Olsen, on behalf of the Board of Directors

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SANTA CLARA
Valley Transportation Authority
Part of every trip you take

December 10, 1999

City of Fremont
Development and Environmental Services Department
Planning
P.O. Box 5006
Fremont, CA 94537-5006

Attention: Len Banda, Senior Planner

Subject: SCH No. 8721715 / Pacific Commons Project Supplemental Environmental Impact Report Notice of Preparation

Dear Mr. Banda:

Santa Clara County Valley Transportation Authority (VTA) staff have reviewed the Notice of Preparation for a Supplemental Environmental Impact Report for the Pacific Commons Project, the approved 1996 development plan for the area west of I-880, south of Auto Mall Parkway, north of Cushing Parkway and east of the Southern Pacific Railroad tracks. We have the following comments.

VTA staff encourage the City to include pedestrian, bicycle and transit-oriented design features that make the use of alternate modes of transportation more viable. Such design features will help to reduce the project's impacts on traffic.

Thank you for the opportunity to review this project. If you have any questions, please call Lauren Bobadilla of my staff at (408) 321-5776.

Sincerely,

for

Roy Molseed
Senior Environmental Analyst

RM:LGB:kh

cc: Derek Kantor, VTA Environmental Program Manager

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December 13, 1999

Len Banda, Senior Planner
City of Fremont Planning Division
P.O. Box 5006
Fremont, CA 94537-5006

Subject: Notice of Preparation of a Supplemental Environmental Impact Report for the Pacific Commons Project

Dear Mr. Banda:

Pursuant to the notice of preparation, dated November 19, 1999, of a supplemental environmental impact report for the Pacific Commons Project in the City of Fremont, I am submitting comments by the Bay Trail Project on the scope and content of the subject SEIR. Ours is a nonprofit organization administered by the Association of Bay Area Governments (ABAG) that plans, promotes and advocates for implementation of the Bay Trail. The Bay Trail is a planned continuous 400-mile bicycling and hiking corridor that, when complete, will encircle San Francisco and San Pablo bays and cross the major toll bridges in the region. The Bay Trail alignment passes through 47 cities (including Fremont) and links the shoreline of all nine Bay Area counties. Enclosed for your reference are a map of the entire Bay Trail alignment and a fact sheet with additional information about the Bay Trail.

We request that, if previous environmental documents for the project did not do so, the subject SEIR include a mention of the Bay Trail Plan in the document's section on plans and policies. For your information, State Senate Bill 100, passed into law in 1987, directed ABAG to develop a plan "for a continuous recreational corridor which will extend around the perimeter of San Francisco and San Pablo Bays." The plan for this corridor, which became known as the Bay Trail, was developed over a two-year period by an advisory committee that included representatives from a broad range of interests, including Federal, State, regional and local government agencies, environmental and recreational organizations, private landowners and large business corporations. The Bay Trail Plan was adopted by ABAG in July 1989. (Earlier that year, on May 9, the Fremont City Council had passed a resolution in support of the plan's final draft.)

We also request that the SEIR describe existing and proposed Bay Trail segments and other pedestrian and bicycle facilities in the project area if this information has not yet been analyzed. For your reference, I am also enclosing one of our full-color maps of the Bay Trail alignment in the South Bay as well as a copy of our more detailed in house map of the area. As you can see on the maps, the

Administered by the Association of Bay Area Governments
P.O. Box 2050 • Oakland, California 94604-2050
Metropolitan Transportation Commission • 101 Eighth Street • Oakland, California 94607-4700
Phone: 510 464-7900
Fax: 510 464-7970

adopted Bay Trail alignment in the project area travels along the Southern Pacific Railroad right-of-way and on Cushing Road; because the Bay Trail Plan foresaw difficulties in implementing the Bay Trail along the SPRR ROW, the adopted alignment also includes a parallel route, from Thornton Avenue in Newark to Cushing Road, less than one mile to the east. In addition, the Bay Trail Plan identified a connector trail on Auto Mall Parkway (and, further east, on Durham Road, Mission Boulevard and Stanford Avenue) to link the Bay Trail with Mission Peak Regional Preserve. Again, if this has not yet been done, the SEIR should identify any significant inconsistencies between the Pacific Commons development and the alignment proposed in the Bay Trail Plan, as well as potential significant impacts that the project would have on existing facilities.

Because of the location of the Pacific Commons site, its development presents a valuable opportunity to bridge the currently inaccessible portion of the Bay Trail between Auto Mall Parkway to the north and Cushing Road/Parkway to the south. It is possible that this could even be done as part of the completion of Cushing Parkway, which the NOP mentions is included in the project description. We encourage the City of Fremont and the project sponsor to take advantage of this rare opportunity to develop the Bay Trail through the site. Such a facility would not only serve recreational purposes but also be a viable alternative to automobile travel in the area, which would mitigate some of the air quality and traffic impacts of the motor-vehicle trips generated by the project. (One side of the enclosed fact sheet outlines the transportation role of the Bay Trail.)

The Bay Trail is a unique regional resource that will provide residents of Fremont and the rest of the Bay Area with greater transportation options, increased access to the outdoors and the Bay, and inexpensive recreation, exercise and sightseeing opportunities. I offer you our assistance in implementing the Bay Trail as part of the Pacific Commons development. Please contact me at 510/464.7915 if you have questions about the comments in this letter, would like additional information about the Bay Trail, or need technical assistance on the planning and design of trails.

Sincerely,

Niko Letunic
Bay Trail Planner

Enclosures

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ALAMEDA COUNTY CONGESTION MANAGEMENT AGENCY

AC Transit
Director
Matt Williams

Alameda County
Supervisors
Gail Steele
Scott Haggerty

City of Alameda
Mayor
Ralph Appezzato

City of Albany
Mayor
Peggy Thomsen

BART
Director
Pete Snyder

City of Berkeley
Councilmember
Kriss Worthington

City of Dublin
Councilmember
George A. Zika

City of Emeryville
Vice Mayor
Nora Davis

City of Fremont
Mayor
Gus Morrison

City of Hayward
Chairperson
Mayor
Roberta Cooper

City of Livermore
Councilmember
Tom Vargas

City of Newark
Councilmember
Susan Boggs

City of Oakland
Councilmember
Larry Reid

City of Piedmont
Councilmember
Valerie Metzger

City of Pleasanton
Vice Chairperson
Councilmember
Tom Pico

City of San Leandro
Mayor
Sheila Young

City of Union City
Mayor
Mark Green

Executive Director
Dennis R. Fay

December 20, 1999

Mr. Len Banda
Development and Environmental Services Department
City of Fremont
39550 Liberty Street
P.O. Box 5006
Fremont, CA 94537-5006

SUBJECT: Comments on the Notice of Preparation of a Supplemental Environmental Impact Report for the Pacific Commons Project in the City of Fremont

Dear Len:

Thank you for the opportunity to comment on the City of Fremont's Notice of Preparation of a Supplemental Environmental Impact Report (SEIR) for the Pacific Commons Project. The Pacific Commons Project is located on 768 acres bounded by I-880 to the east, Auto Mall Parkway to the north, the existing Cushing Parkway terminus to the south, and the Southern Pacific Railroad right-of-way and the San Francisco Bay National Wildlife Refuge to the west. This SEIR proposed to incorporate and implement mitigation measures and conditions of approval defined in the City-approved 1996 SEIR and Development Agreement. According to the NOP and conversations with City staff, implementation of these measures will result in reduced development compared to the previously approved project and would result in a corresponding reduction in daily and peak hour trips.

Based on this information, we have no comment because the project does not meet the Tier 1 requirements of generating 100 or more p.m. peak hour trips over baseline conditions. It is exempt from the Land Use Analysis Program of the CMP.

Once again, thank you for the opportunity to comment. Please do not hesitate to contact me if you require additional information. I can be reached at 510/836-2560 ext. 13.

Sincerely,

Beth Walukas
Senior Transportation Planner

cc: Jean Hart, Deputy Director
file: CMP - Environmental Review Opinions - Responses - 1999

1333 BROADWAY, SUITE 220, • OAKLAND, CA 94612 • PHONE: (510) 836-2560 • FAX: (510) 836-2185
E-MAIL: AlaCoCMA@aol.com • WEB SITE: accma.ca.gov

APPENDIX B

RESOURCE AGENCIES' PERMITS AND SUPPORTING DOCUMENTATION

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
333 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94105-2197

REPLY TO
ATTENTION OF:

SEP 0 7 1999

Regulatory Branch

SUBJECT: File Number 220851S

Mr. Don Little
Catellus Development Corporation
201 Mission Street
San Francisco, California 94105

Dear Mr. Little:

Enclosed is your signed copy of a Department of the Army permit (Encl 1) to place 1,550,000 cubic yards of fill onto a total of 46 acres of seasonal wetlands and 85,000 cubic yards of fill into 8,100 lineal feet of the N-1 flood control channel in assocation with the construction of the Pacific Commons Development Project located west of Interstate 880 between Automall Parkway and Cushing Boulevard and adjacent to the San Francisco Bay National Wildlife Refuge in the City of Fremont, Alameda County, California.

Please complete the appropriate parts of "Notice to Permittee" form (Encl 2), and return it to this office. You are responsible for ensuring that the contractor or workers executing the activity authorized herein is knowledgeable with the terms and conditions of this authorization, and that the "Notice of Authorization," ENG Form 4336 (Encl 3), is posted in a conspicuous place at the site prior to the start of work.

Should you have any questions please call Mark D'Avignon of our Regulatory Branch at 415-977-8446. Please address all correspondence to the attention: Regulatory Branch, and refer to the file number at the head of this letter.

Sincerely,

Peter T. Grass
Lieutenant Colonel, Corps of Engineers
District Engineer

DEPARTMENT OF THE ARMY PERMIT

Permittee: Catellus Development Corporation and the City of Fremont

Permit No.: 220851S

Issuing Office: San Francisco District

NOTE. The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: The permittee is authorized to place a total of approximately 1,550,000 cubic yards of fill material into a total of 46 acres of seasonal wetlands (24.5 acres of jurisdictional wetlands and 21.5 acres of non-jurisdictional wetlands), and a total of 85,000 cubic yards of fill material into 8,100 lineal feet of the N-1 flood control channel in association with the construction of the Pacific Commons Development Project. The permittee is also authorized to carry out mechanized land clearing and place fill material into seasonal wetlands in assocation with implementation of the Ecosystem Restoration Plan for the Pacific Commons Site dated August 24, 1998, and the Long-term Management Plan for the Pacific Commons Preserve dated March 1999.

All authorized work shall be carried out in accordance with the attached plans and drawings marked, "Pacific Commons Project, Location: Auto Mall Parkway and Highway 880, County of Alameda, Application by: City of Fremont and Catellus Development Corporation" in 10 sheets dated June 1998.

Project Location: The Pacific Commons Project is located in the City of Fremont west of Interstate 880, south of Automall Parkway and north of Cushing Parkway, Alameda County, California.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on September 1, 2009. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. The permittee shall implement the "Ecosystem Restoration Plan for the Pacific Commons Site, Fremont, California" prepared by Laurence P. Stromberg, Ph.D dated August 24, 1998.

2. The permittee shall also implement the "Long-Term Management Plan for the Pacific Commons Preserve" prepared by Wetlands Research Associates, Inc. dated March 1999.

3. The permittee shall comply with all terms and conditions stipulated in the Incidental Take Statement of the U.S. Fish and Wildlife Service's Biological Opinion entitled, "Formal Endangered Species Consultation on the Proposed Pacific Commons Project, Fremont, Alameda County, California" (No. 1-1-99-F-0004) prepared by the U.S. Fish and Wildlife Service's Sacramento Field Office dated May 14, 1999.

4. In the course of monitoring the pollinator populations for the Contra Costa goldfields as required by the Biological Opinion, the permittee shall develop practicable management actions with the U.S. Fish and Wildlife Service to enhance the Contra Costa goldfield population viability by conserving goldfield insect pollinator habitat within the Pacific Commons Ecological Preserve.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

(Permittee) 9/3/99 (Date)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

(District Engineer) Peter T. Grass
LTC, EN

9/7/99 (Date)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(Transferee) (Date)

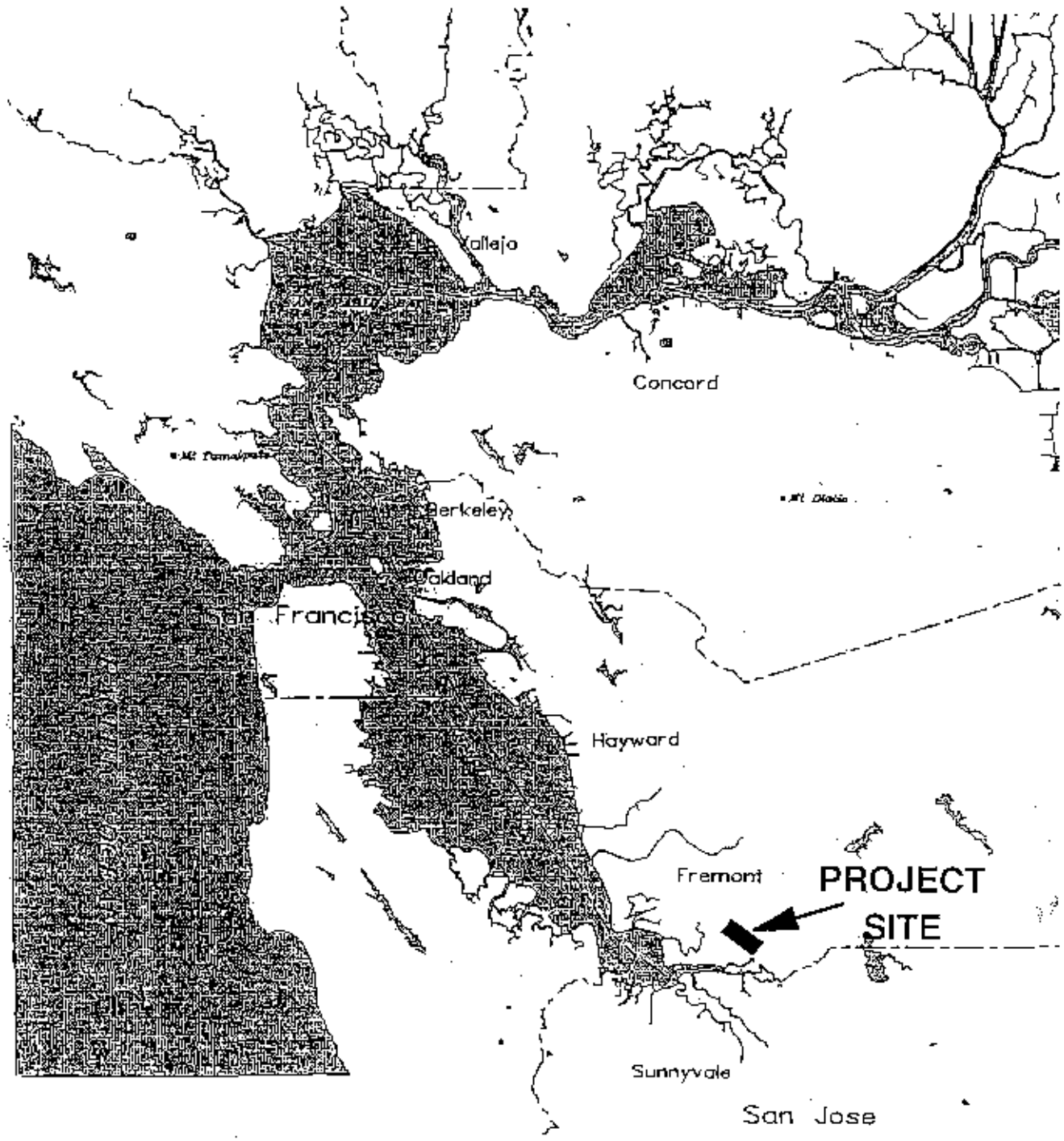


Figure 1

PURPOSE: Construction DATUM: NGVD, 1929 ADJACENT PROPERTY OWNERS: See Application	REGIONAL SETTING MAP 6 0 6 12 MILES SCALE 1" = 12 miles City of Fremont & Catellus Devel. Corp 39700 Civic Center Drive Fremont, CA 94538 510-494-4802 201 Mission Street San Francisco, CA 94105 415-974-1500	Pacific Commons Project LOCATION: Auto Mall Parkway and Highway 880 COUNTY: Alameda APPLICATION BY: City of Fremont and Catellus Development Corporation SHEET: 1 of 10 DATE: June 1998

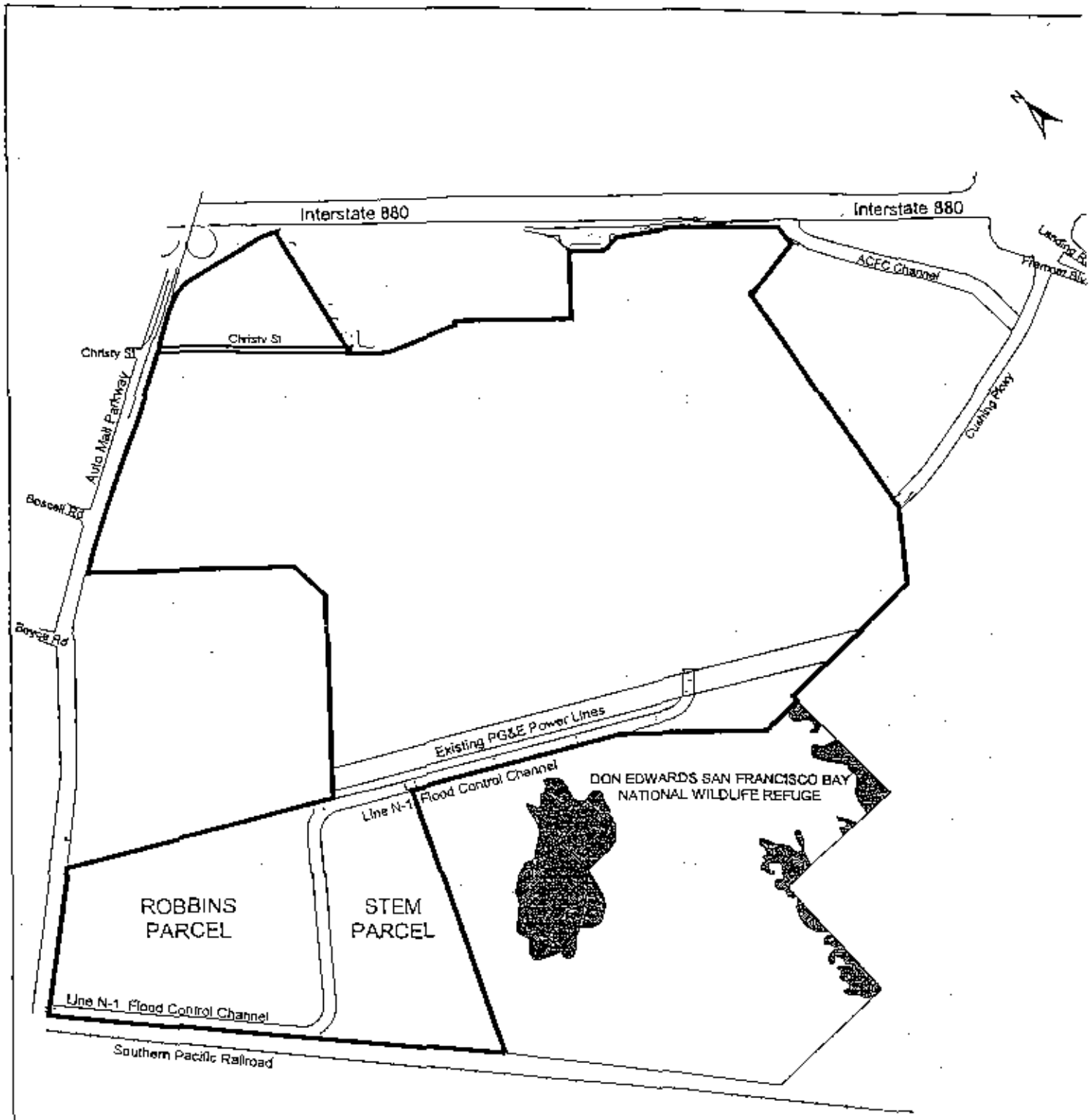
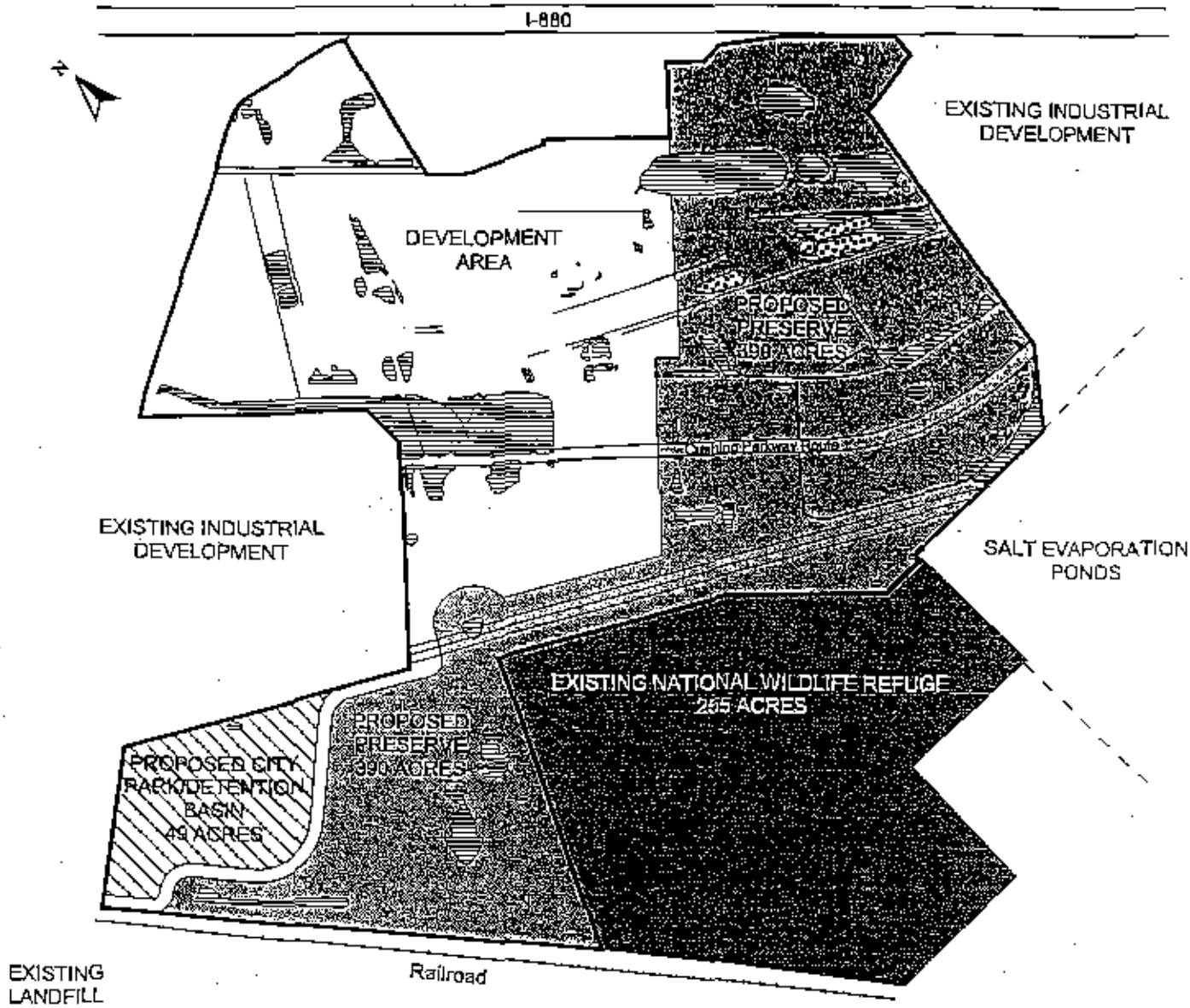


Figure 2

PURPOSE: Construction DATUM: NGVD ADJACENT PROPERTY OWNERS: See Application	BOUNDARIES OF PROJECT SITE 550 0 550 1100 FEET SCALE 1:13,200 City of Fremont 39700 Civic Center Drive Fremont, CA 94538 510-494-4802 Catellus Devel. Corp. 201 Mission Street San Francisco, CA 94105 415-974-4500	PACIFIC COMMONS PROJECT LOCATION: Auto Mall Parkway and Highway 880 COUNTY: Alameda APPLICATION BY: City of Fremont and Catellus Development Corporation SHEET: 2 of 10 DATE: August 1998



LEGEND

- SEASONAL WETLANDS
- GOLDFIELD POPULATIONS
- PROPOSED CITY PARK/ DETENTION BASIN
- PRESERVE AREAS
- EXISTING NATIONAL WILDLIFE REFUGE
- AREA REPRESENTING 10 ACRES

390-ACRE REFUGE ALTERNATIVE
Pacific Commons Project Site
Fremont, California

TOTAL EXISTING UNDEVELOPED AREA	746
TOTAL PRESERVE AREA	390
CUSHING (WITHIN PRESERVE)	9
TOTAL PARKS/DETENTION BASIN	49
TOTAL DEVELOPABLE AREA	297

Figure 3

PURPOSE: Construction

DATUM: NGVD

ADJACENT PROPERTY OWNERS: See Application

390-ACRE REFUGE ALTERNATIVE

500 0 500 1000 FEET

SCALE 1:24,000

City of Fremont
39700 Civic Center Drive
Fremont, CA 94538
510-494-4802

&

Catellus Devel. Corp.
201 Mission Street
San Francisco, CA 94105
415-974-4500

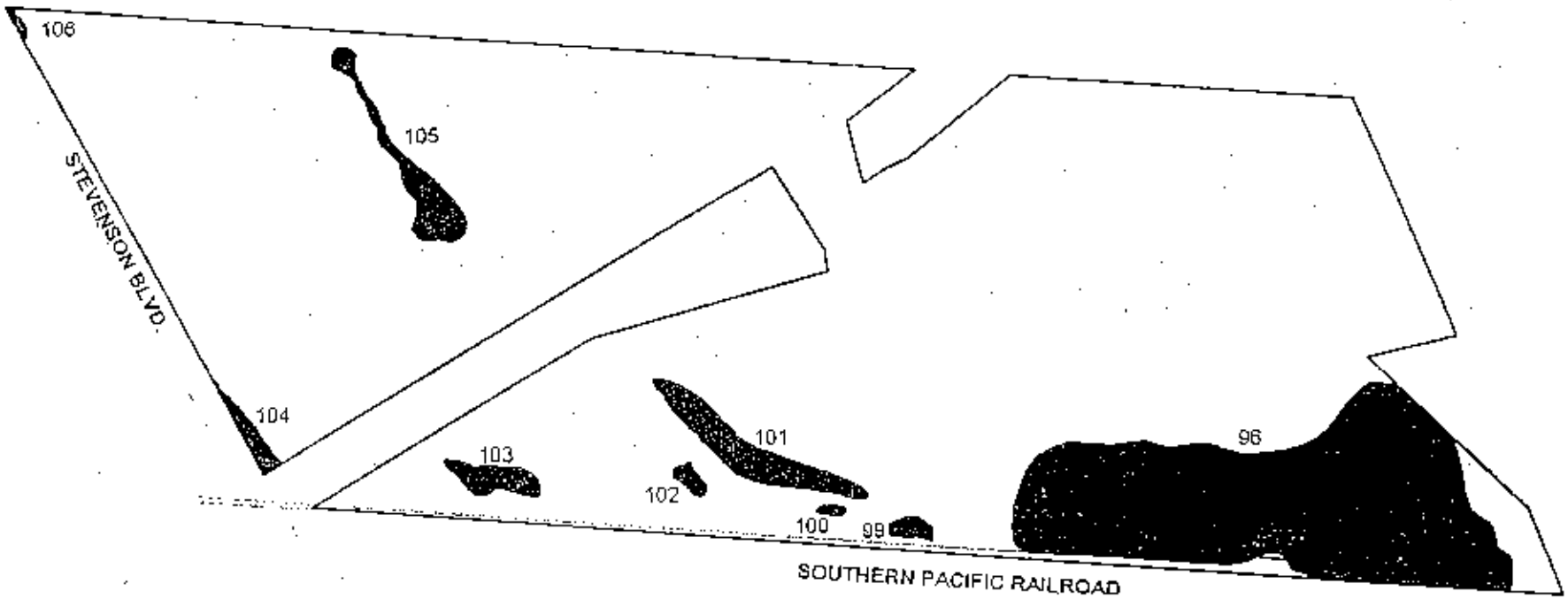
PACIFIC COMMONS PROJECT

LOCATION: Auto Mall Parkway and Highway 880

COUNTY: Alameda

APPLICATION BY: City of Fremont and Catellus Development Corporation

SHEET: 3 OF 10 DATE: August 1998



LEGEND

Seasonally Ponded Wetlands
(ACOE Jurisdiction)

Figure 4

PURPOSE: Construction

DATUM: NGVD

SOURCE:

Environmental Science Associates, Inc.

STEVENSON MITIGATION SITE

175 0 175 350 FEET

SCALE 1:4200

City of Fremont & Catellus Devel. Corp.
39700 Civic Center Drive
Fremont, CA 94538
510-494-4802

201 Mission Street
San Francisco, CA 94105
415-974-4500

Pacific Commons Project

LOCATION: Auto Mall Parkway and Highway 880

COUNTY: Alameda

APPLICATION BY: City of Fremont and Catellus Development Corporation

SHEET: 4 OF 10 DATE: August 1998

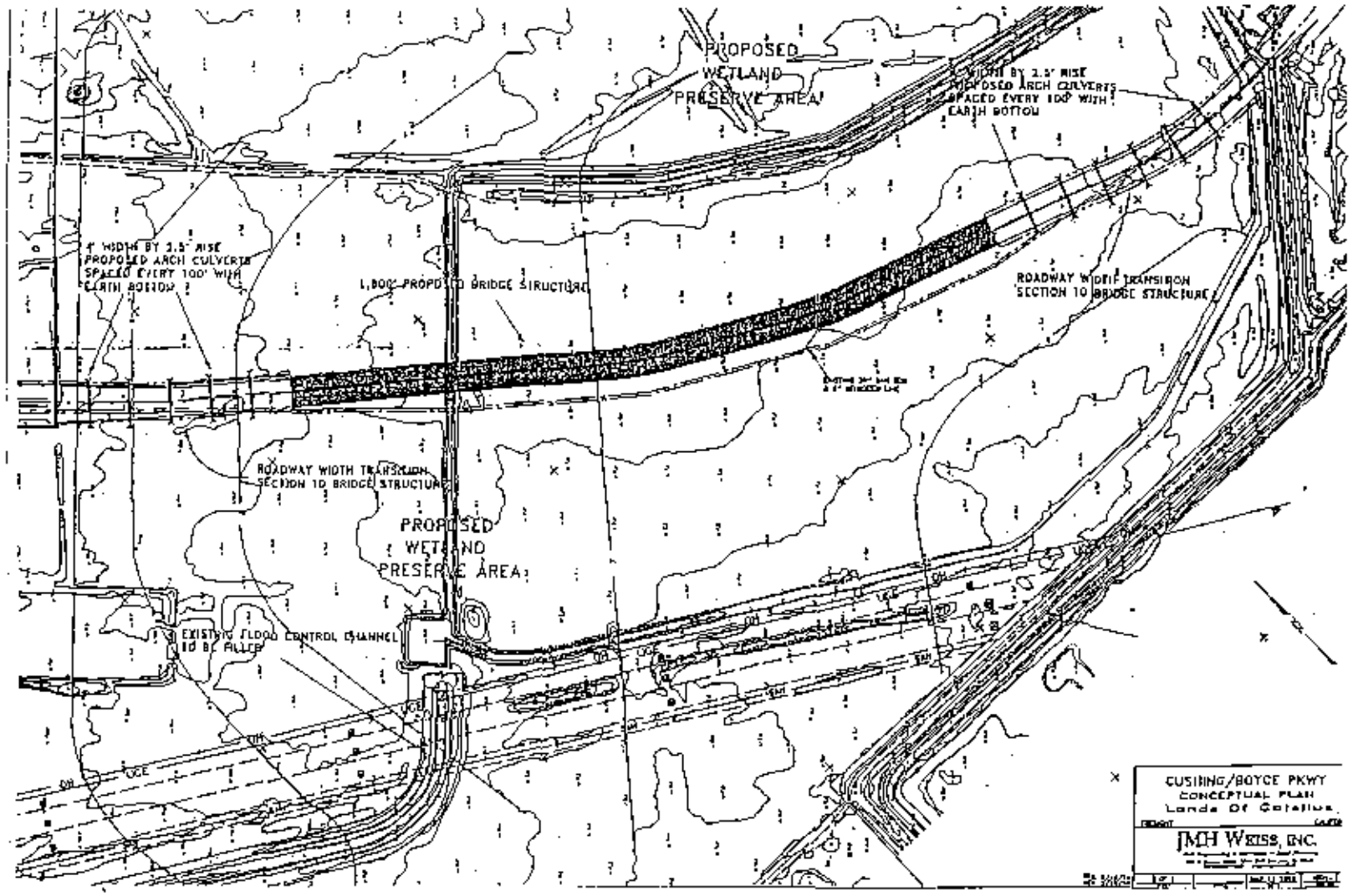


Figure 5

PURPOSE: Construction

DATUM: NGVD

ADJACENT PROPERTY OWNERS:
See Application

SOURCE: JMH WEISS INC.

CUSHING PARKWAY: CONCEPTUAL PLAN

212 0 212 424 FEET

SCALE 1:5088

City of Fremont & Catellus Devel. Corp.
39700 Civic Center Drive
Fremont, CA 94538
510-494-4802

201 Mission Street
San Francisco, CA 94105
415-974-4500

Pacific Commons Project

LOCATION: Auto Mall Parkway and Highway 880

COUNTY: Alameda

APPLICATION BY: City of Fremont and Catellus Development Corporation

SHEET: 5 OF 10 DATE: August 1998

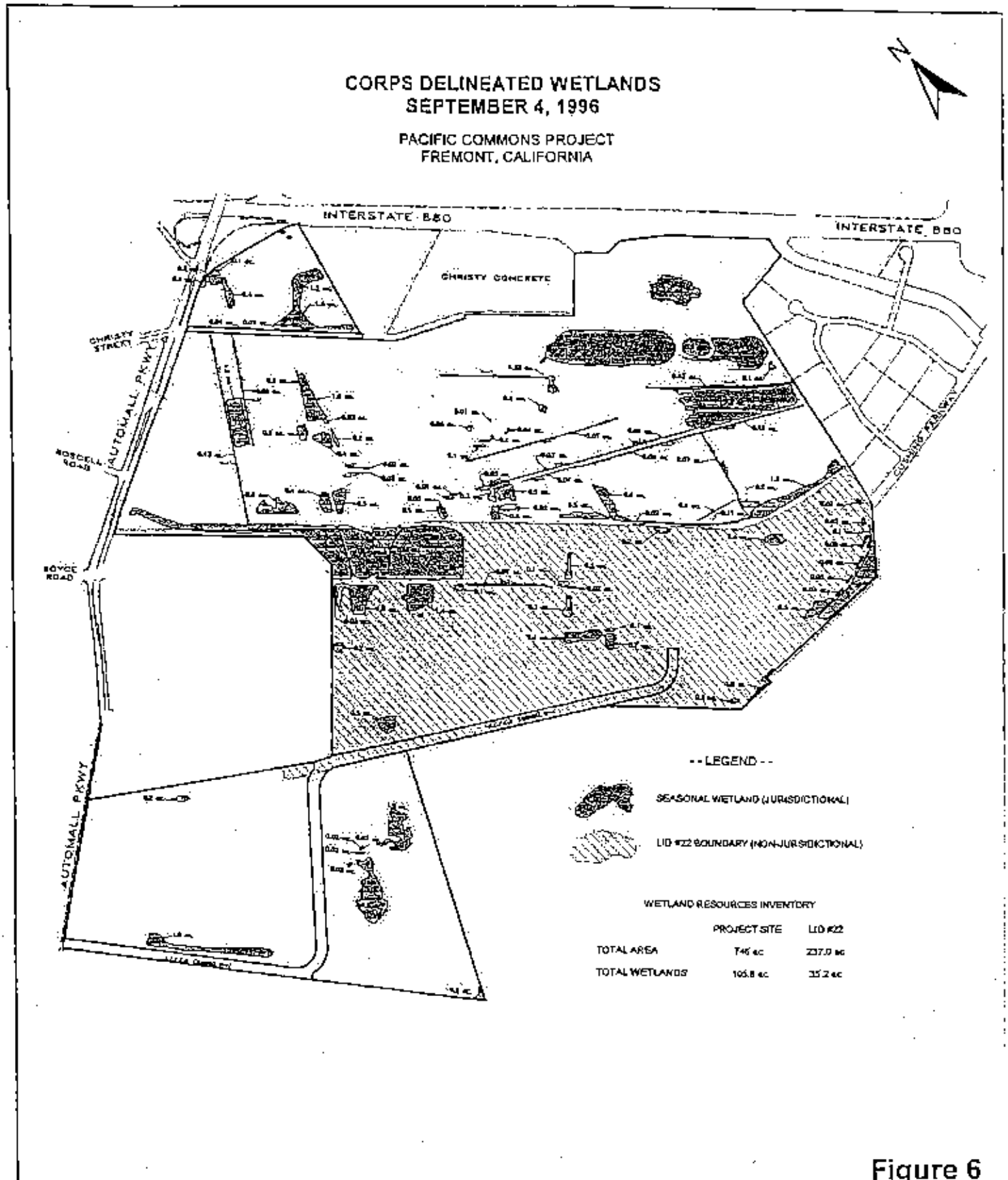
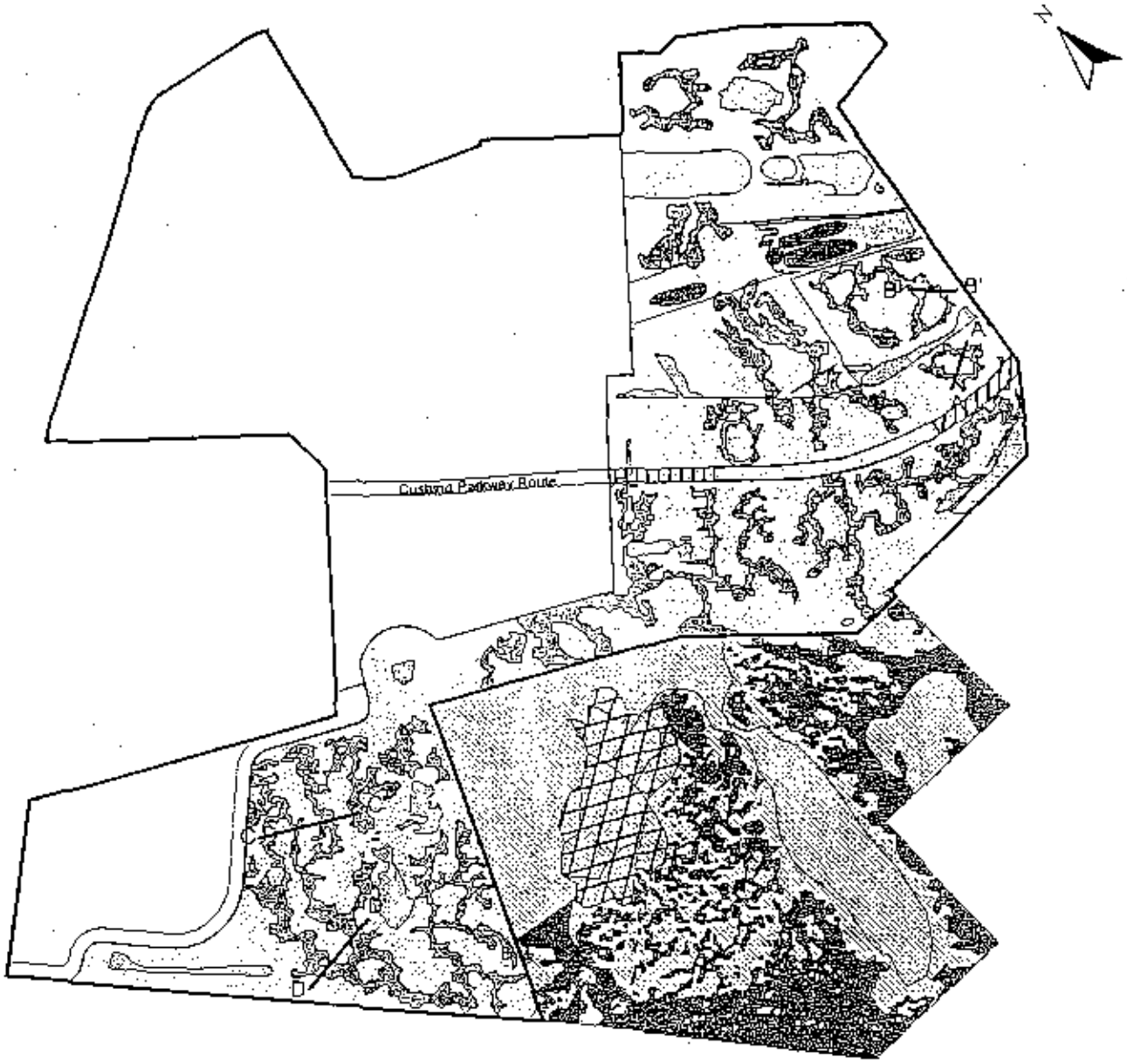


Figure 6

PURPOSE: Construction	JURISDICTIONAL DELINEATION MAP	PACIFIC COMMONS PROJECT
DATUM: NGVD	750 0 750 1500 FEET SCALE 1:18,000	LOCATION: Auto Mall Parkway and Highway 880
ADJACENT PROPERTY OWNERS: See Application		COUNTY: Alameda
	City of Fremont 39700 Civic Center Drive Fremont, CA 94538 510-494-4602 & Catellus Devel. Corp. 201 Mission Street San Francisco, CA 94105 415-974-4500	APPLICATION BY: City of Fremont and Catellus Development Corporation
		SHEET: 6 OF 10 DATE: August 1998



– LEGEND –

NATURAL SEASONAL WETLANDS	FORMER DUCK PONDS
JURISDICTIONAL SEASONAL WETLANDS	APPROXIMATE LOCATIONS OF CONTRA COSTA GOLDFIELD POPULATIONS
CREATED SEASONAL WETLANDS	UNMAPPED AREA
UPLANDS	TRANSECT LINE

Figure 7

PURPOSE: Construction

DATUM: NGVD, 1929

ADJACENT PROPERTY OWNERS
See Application

ECOSYSTEM RESTORATION PLAN

SCALE 1:19,200

City of Fremont
39700 Civic Center Drive
Fremont, CA 94538
510-494-4802

Catellus Devel. Corp.
201 Mission Street
San Francisco, CA 94105
415 974-4500

Pacific Commons Project

LOCATION: Auto Mall Parkway and Highway

COUNTY: Alameda

APPLICATION BY: City of Fremont and Cate Development Corporation

SHEET: 2 OF 10 DATE: August 1998

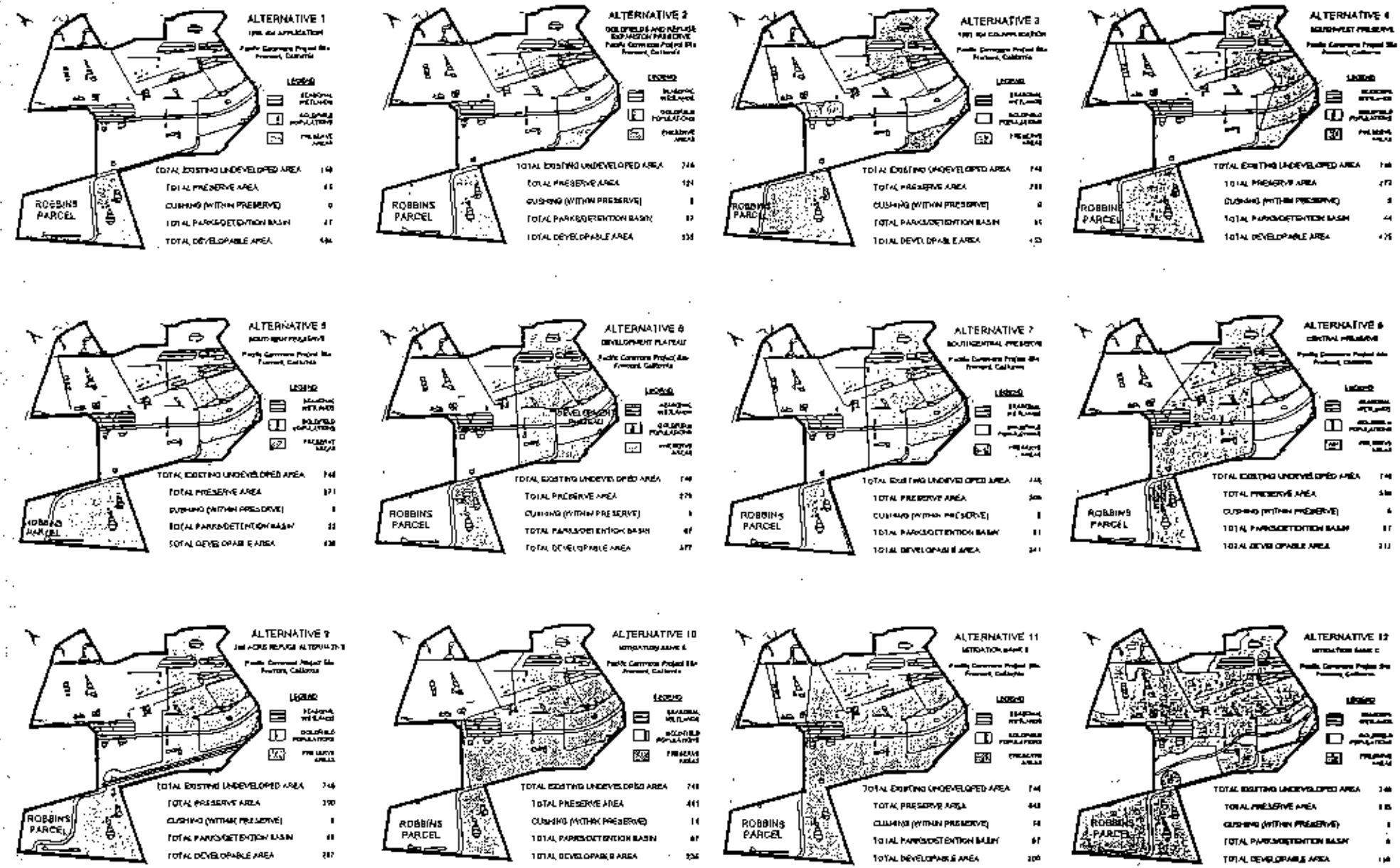


FIGURE 8

PURPOSE: Construction

DATUM: NGVD

ADJACENT PROPERTY OWNERS:
See Application

ALTERNATIVE REDEVELOPMENT/PRESERVE AREA CONFIGURATIONS

2300 0 2300 4600 FEET

SCALE 1:55,200

City of Fremont
39700 Civic Center Drive
Fremont, CA 94538
510-494-4802

Catellus Development Corporation
201 Mission Street
San Francisco, CA 94105
415-974-4500

PACIFIC COMMONS PROJECT

LOCATION: Auto Mall Parkway and Highway 880

COUNTY: Alameda

APPLICATION BY: City of Fremont and Catellus Development Corporation

SHEET: 8 of 10

DATE: August 1998

Cushing Parkway Alignment Alternatives

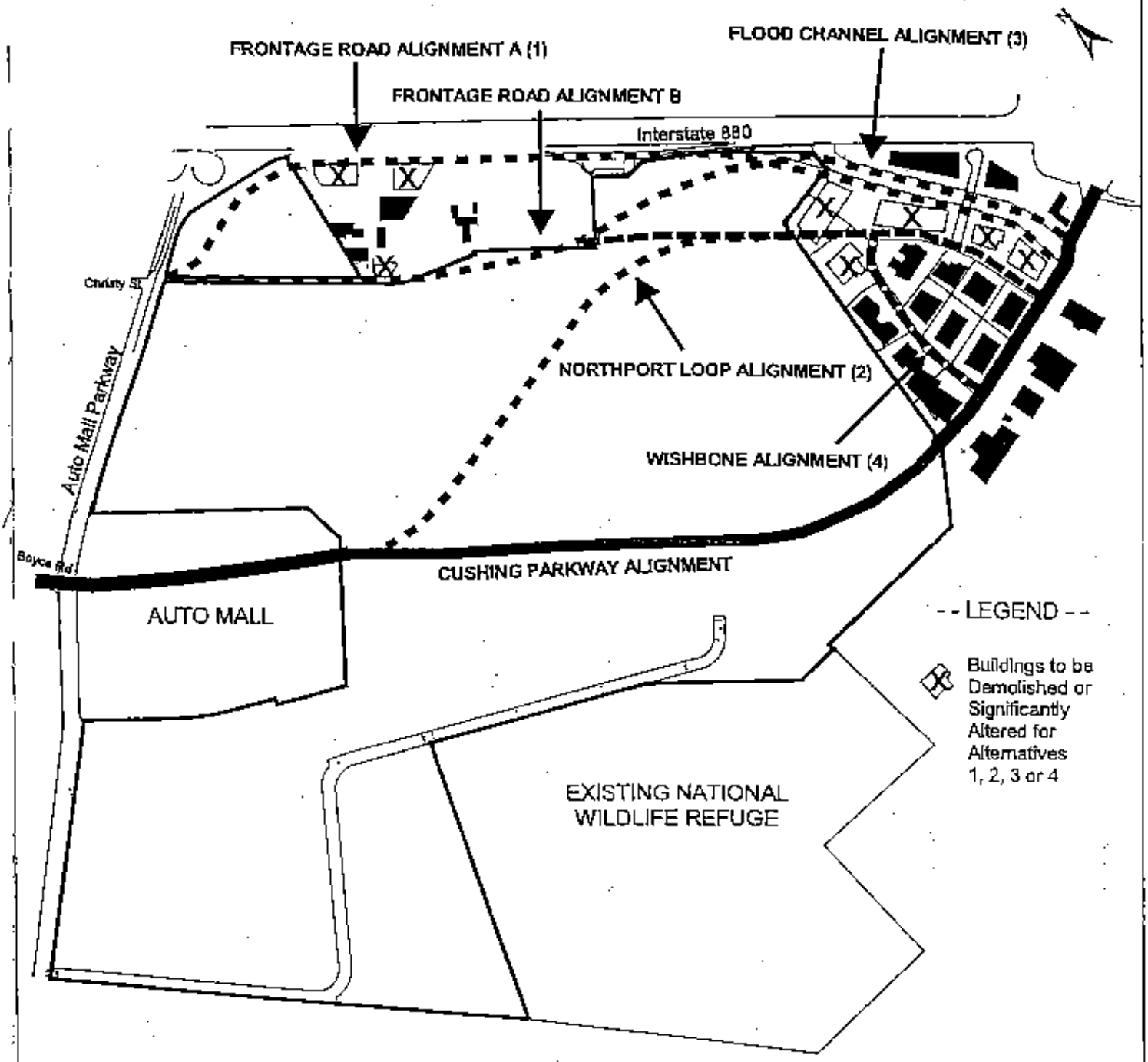


Figure 9

PURPOSE: Construction DATUM: NGVD ADJACENT PROPERTY OWNERS: See Application	CUSHING PARKWAY ALIGNMENT ALTERNATIVES 550 0 550 1100 FEET SCALE 1:13,200 City of Fremont, 39700 Civic Center Drive, Fremont, CA 94538, 510-494-4802 Catellus Devel. Corp., 201 Mission Street, San Francisco, CA 94105, 415-974-4500	PACIFIC COMMONS PROJECT LOCATION: Auto Mall Parkway and Highway 880 COUNTY: Alameda APPLICATION BY: City of Fremont and Catellus Development Corporation SHEET: 9 of 10 DATE: August 1998

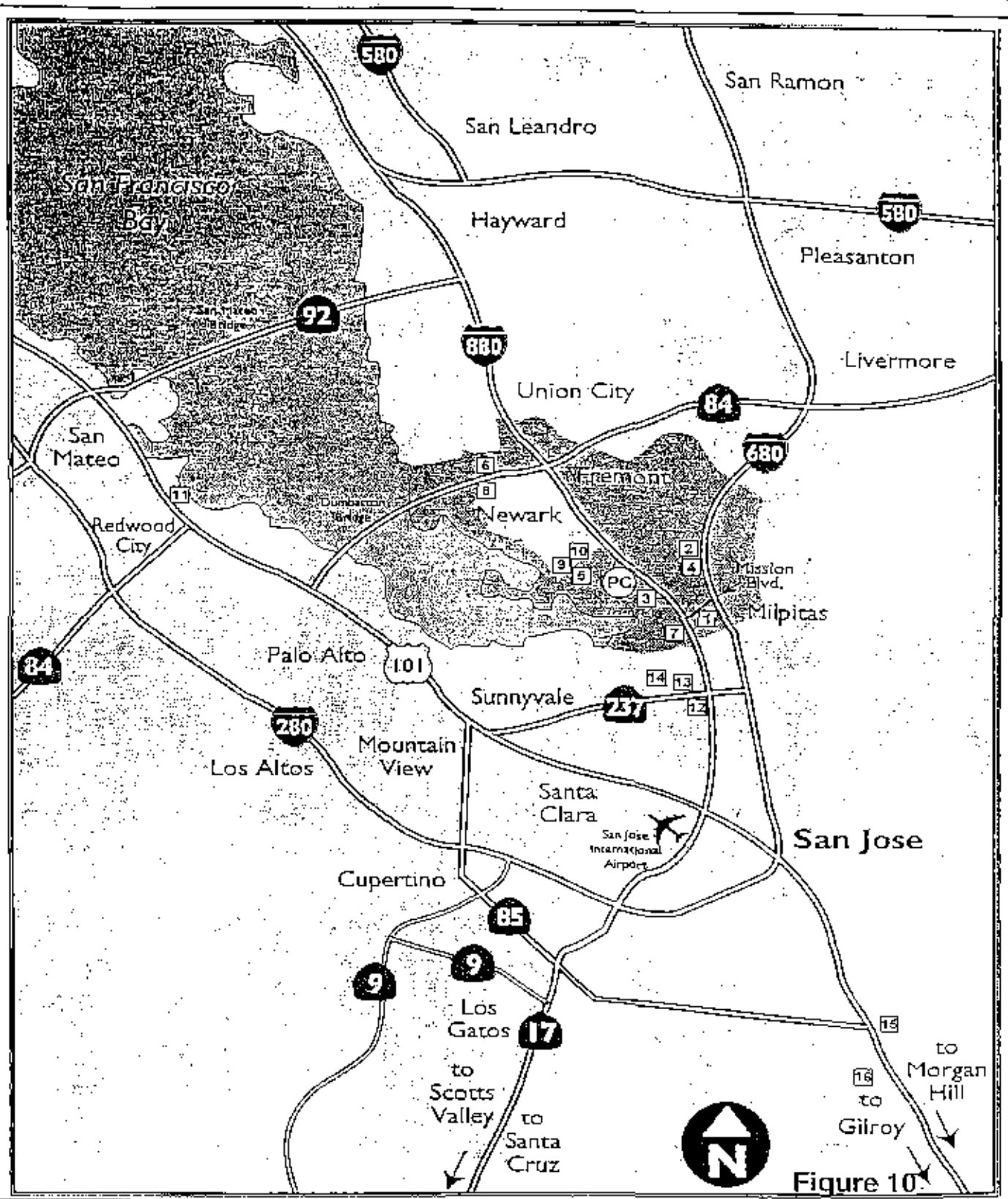


Figure 10

PURPOSE: Construction	OFF-SITE ALTERNATIVES	Pacific Commons Project
DATUM: NGVD, 1929	250 0 250 500 FEET	LOCATION: Auto Mall Parkway and Highway 880
ADJACENT PROPERTY OWNERS:	SCALE 1:6000	COUNTY: Alameda
See Application	City of Fremont, 39700 Civic Center Drive, Fremont, CA 94538, 510-494-4802 & Catellus Devel. Corp., 201 Mission Street, San Francisco, CA 94105, 415-974-4500	APPLICATION BY: City of Fremont and Catellus Development Corporation
		SHEET: 10 of 10 DATE: August 1998

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
3310 El Camino Avenue, Suite 130
Sacramento, California 95821-6340

IN REPLY REFER TO:
1-1-99-F-0004

May 14, 1999

Lt. Colonel Peter T. Grass, District Engineer
(Attn.: Mark D'Avignon, Regulatory Branch)
San Francisco District, Corps of Engineers
333 Market Street
San Francisco, California 94105-2197

Subject: Formal Endangered Species Consultation on the Proposed Pacific Commons Project, Fremont, Alameda County, California (Public Notice Number 220851S)

Dear Colonel Grass:

The U.S. Fish and Wildlife Service (Service) has reviewed the proposed Pacific Commons project for possible effects on threatened and endangered species. Your October 22, 1998, request for formal consultation was received on October 23, 1998. This document represents the Service's biological opinion on the effects of issuance of a Clean Water Act section 404 permit, for filling of wetlands by the proposed project, on the following federally listed species in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act): the endangered Contra Costa goldfields (*Lasthenia conjugens*) and the endangered vernal pool tadpole shrimp (*Lepidurus packardi*). We have determined that the project as proposed is not likely to adversely affect the salt marsh harvest mouse (*Reithrodontomys raviventris*), and this species is not addressed further in this document.

This biological opinion is based on information provided in the U.S. Army Corps of Engineers (Corps) September 10, 1998, Public Notice regarding the project; the January 4, 1998, "Memorandum" with attachments from James T. Burroughs of Beveridge & Diamond, LLP, to the Service (Appendix A); the applicants' "Ecosystem Restoration Plan" (Stromberg *et al.*, 1998) (Appendix B); engineering/architectural drawings (5 sheets) of conceptual design for Cushing Parkway, received by the Service August 21, 1998; reports of surveys for special-status species and their habitat (Arnold 1997a, b, Belk and Arnold 1997, ENTRIX 1997); letters from the Service to the Corps and the project co-applicants or their agents (our file numbers PN 22085S, 1-1-97-I-433, 1-1-97-I-939, 1-1-98-I-1725, and 1-1-98-I-2224); and numerous meetings and site visits. A complete administrative record of this consultation is on file in this office.

BIOLOGICAL OPINION

Description of the Proposed Action

The proposed action, known as the Pacific Commons project, consists of the development of approximately 345 acres as a business park, 49 acres as a City recreational park (portions of which would also act as detention and retention basins to manage storm water flows from the business park), construction of the Cushing Parkway roadway across the project site, and preservation and restoration of 391 acres for a habitat preserve ("Preserve"). The Pacific Commons project is located on approximately 877 acres in a redevelopment area of the City of Fremont, Alameda County, California, and is bounded by the Nimitz Freeway (Interstate 880) to the east, Auto Mall Parkway to the north, the existing Cushing Parkway terminus to the south, and the Southern Pacific Railroad right-of-way and the San Francisco Bay National Wildlife Refuge Complex (Refuge) to the west. The configuration of the site, including the proposed business park, Cushing Parkway, and Preserve superimposed on major existing wetlands, is shown in Figure 1.

Where Cushing Parkway crosses the Preserve, it would be a four-lane arterial with a 4-foot wide divider. There would be four 12-foot wide traffic lanes, two 8-foot wide bike lanes (one in each direction), and a 7-foot wide sidewalk on the inland side of the roadway. To reduce impacts to the Preserve, the parkway would be partially elevated. An 1,800-foot span on precast concrete pilings at a two to five foot elevation above ground level would be constructed to increase the connectivity of the preserve, and culverts would be installed under the 600-foot approaches at either end of the elevated span. See Figures 2 and 3. The 4-foot wide arched culverts with earth bottoms would be installed approximately every 100 feet along the approaches to convey water from upstream to downstream wetlands without restriction and to permit wildlife passage. More details on the proposed Cushing Parkway is contained in the section 404 Permit Application "Alternatives Analysis" for the project (City of Fremont and Catellus 1998, their figures 25-28).

Older aerial photographs as well as soils and existing wetlands patterns on and adjacent to the site suggest that, prior to human modification, much of the site supported an extensive vernal pool and seasonal wetlands complex, including uplands, as well as a limited amount of intertidal channels. The Bay Area contains three areas of historic vernal pool soils: adjacent to Suisun Marsh, west of Sonoma Creek, and in the Fremont/Newark area--including the proposed project site (EcoAtlas, 1997). Further studies confirmed that the project site is the largest contiguous undeveloped area of vernal pool soils remaining in the vicinity of the south San Francisco Bay (Wetlands Research Associates 1998).

Historically, the Pacific Commons portion of the site has been used by humans for farming, duck clubs, and grazing. The southeast portion of the site has been used as a raceway and skysailing air strip, and the southwestern portion of the site contains electrical transmission lines and the

Alameda County Flood Control District's N-1 Channel. Irrigation and drainage activities over the years resulted in modification of the topography, leaving mounds of soil and rubble, ditches, berms, and areas of pavement. Fill was added to portions of the site (primarily in the southwestern corner) for agriculture development purposes. Excavation of soil for development of a portion of the site (the auto mall) modified the topography to form a large, shallow area that seasonally fills with water (the "Oklahoma" pond, so named because of its shape). As a result of these various human uses, much of the site has been disturbed at some time.

The upland areas of the project site are annual grassland, dominated by non-native grasses and weeds, with widely scattered patches of native grasses. The wetlands areas consist of a total of 105.6 acres, as determined by a wetlands delineation for the project site, approved by the Corps on September 4, 1996. The wetlands resources at the site consist of both seasonal wetlands and wet meadows. About 2.3 acres of seasonal wetlands in the southwestern corner are a remnant of former salt marsh, cut off from tidal flow but retaining salt marsh characteristics. Other wetlands on site are predominantly freshwater in character.

The seasonal wetlands on the site (75.0 acres) intercept and hold rainwater due to their low topographic position (*i.e.*, depressions) and the presence of high-clay soils which become saturated and relatively impermeable during periods of rain. Seasonal pools, characterized by an ability to pond water from several weeks to two or more months, are a significant subset of the seasonal wetlands. The wet meadows on the site (30.6 acres) also exhibit hydrophytic vegetation with saturated soils, but do not pond water as long as the seasonal wetlands. Unlike seasonal wetlands, wet meadows are only distinguished from the surrounding uplands by the presence of slightly depressed ground that supports algal growth and greater predominance of hydrophytic plant species. So much of the site is low and wet that wet meadow areas were not precisely mapped, instead, in the wetlands delineation the amount of wet meadow area was calculated statistically from vegetation measurements at a grid of sampling points. Wet meadows are therefore presumed to be distributed throughout the site.

The on-site wetland resources provide habitat for plants and wildlife, including the endangered vernal pool tadpole shrimp and the endangered Contra Costa goldfields plant. The proposed project will result in the permanent loss of 46 acres of existing wetlands within the development area. The co-applicants propose compensatory conservation measures for project impacts to wetlands and endangered species habitat, including avoidance and preservation of all existing seasonal pools in the Preserve, and re-creation of an additional 69 acres of wetlands in the Preserve. The co-applicants, with review by the Service, began a portion of the planned restoration work in upland portions of the Stem parcel of the proposed Preserve during the fall of 1998. Under a permit issued by the Service (#TE-825572-1), the co-applicants transferred soil containing tadpole shrimp eggs from the 19.7-acre "Oklahoma" pool to re-created seasonal pools in the Stem parcel, for purposes of establishing new vernal pool tadpole shrimp populations. The tadpole shrimp hatched, and translocated tadpole shrimp developed and reproduced in the

restored pools during the spring of 1999. Fill of the Oklahoma pool, which lies within the proposed development area, will be withheld until monitoring shows two more successful tadpole shrimp reproductive seasons in the restoration pools.

The co-applicants also propose additional off-site wetland conservation measures on approximately 53 acres of the nearby "Stevenson" parcel (Figure 4 and 5). At that site, the co-applicants propose to preserve 7.3 acres of existing wetlands and restore approximately 8 acres of seasonal pools. Vernal pool tadpole shrimp would be translocated to these re-created pools. Both the Preserve and the Stevenson parcel (collectively referred to herein as the "Preserve Areas") would be restored in phases as outlined below.

The co-applicants propose to coordinate with the Alameda County Mosquito Abatement District (District) in the application of vector control measures within the Preserve Areas. The District has stated that mosquitos generally do not inhabit established vernal pools with compacted substrate within open areas. The grazing management plan (below) would remove invasive vegetation that provides developing mosquito larvae with shelter. Ditches are the major mosquito source under existing conditions, and several ditches would be removed as part of the restoration plan. The District would be supplied with a summary map showing the distribution of all sensitive species in the Preserve Areas, to inform personnel involved in vector control. If vector problems are detected within the pools in the Preserve, the District would apply BTI--a bacterial agent that is specific to mosquito and fly larvae, and inhibits maturation to adult mosquitos.

The co-applicants plan to avoid direct impacts to all known Contra Costa goldfields populations on the site. Additionally, the co-applicants propose to implement a goldfields monitoring plan and pollinator monitoring protocol in the Preserve, to survey and protect all rare plants and to identify and protect the Contra Costa goldfields' pollinator population.

The co-applicants have proposed to transfer both Preserve Areas (the 391 acres at the Pacific Commons site and the 53 acres at the Stevenson parcel) to the adjacent Refuge. A copy of the proposed offer to sell is attached as Exhibit 1 of Appendix C. Pending transfer, the sites will be preserved in accordance with the requirements of the project's 404 permit, which will incorporate the reasonable and prudent measures recommended in this biological opinion.

Biological Conservation Measures

Listed below are specific conservation measures as proposed by the co-applicants to be implemented for the listed vernal pool tadpole shrimp and Contra Costa goldfields. These measures would be implemented in conjunction with the Ecosystem Restoration Plan (Stromberg *et al.* 1998, attached as Appendix B), and in the event of any inconsistency with that plan, the measures herein would be the controlling measures.

Conservation Measures for Vernal Pool Tadpole Shrimp:

1. Preservation

On-site Preservation:

A 391-acre Preserve will be established within the Pacific Commons project site. See Figure 1. The on-site Preserve contains 59.6 acres of wetlands, including 38.8 acres of seasonal wetlands and 20.8 acres of wet meadows. All the seasonal pools will be preserved. An estimated 4 acres of wet meadows and 0.9 acres of man-made ditches in the Preserve will be disturbed in the process of restoring the Preserve's habitat values. In creating the on-site Preserve, the co-applicants will:

With one exception for the racetrack pool, maintain buffers of at least 100 feet between the Preserve boundary and the preserved wetlands, and a buffer of at least 250 feet between the Preserve boundary and the existing seasonal pools known to be occupied by vernal pool tadpole shrimp.

Elevate 1,800 linear feet of the Cushing Parkway that will pass through the Preserve, and include culverts at either end within the Preserve where the parkway approaches the elevated portion, to allow for the free movement of surface water and species across the Preserve.

Fill the N-1 Channel within the on-site Preserve, thereby reestablishing biological and hydrological connectivity between the Preserve, the Refuge, and ultimately, the San Francisco Bay.

Construct detention and retention ponds in the northwest corner of the project site to handle the development area's storm water runoff and prevent any such runoff from entering the on-site Preserve.

Agree not to use the Preserve as a staging area, disposal site, or for stockpiling fill for development, except those temporary impacts associated with the Cushing Parkway that will be limited to the narrow construction corridor for the roadway in the on-site Preserve.

Off-site Preservation:

A preserve area will also be established on approximately 53 acres of the nearby Stevenson parcel. See Figures 4 and 5. The Stevenson parcel is also located within the City of Fremont, between Stevenson Boulevard to the north, Southern Pacific Railroad to the west, and the PG&E substation to the south, and it lies within the Refuge's Congressionally approved land acquisition

boundary. The Stevenson parcel contains approximately 7.3 acres of wetlands, all of which will be preserved.

Finally, the co-applicants have agreed to transfer both the Preserve Areas to the San Francisco Bay National Wildlife Refuge. The co-applicants have initiated discussions with the Refuge regarding such a transfer.

2. Restoration

In addition to preservation, a total of 77 acres of wetlands, 31 of which will be seasonal pools capable of supporting vernal pool tadpole shrimp, will be restored and constructed, as follows:

On-site:

Approximately 69 acres of wetlands will be constructed in the on-site Preserve, including re-created swales and gradient connections to achieve the effect of a vernal pool complex. Of these 69 acres of new wetlands, at least 31 acres will be designed to support vernal pool tadpole shrimp.

Off-site:

An additional 8 acres of seasonal pools will be created on the Stevenson parcel and inoculated with vernal pool tadpole shrimp in the same manner as those re-created on the Pacific Commons Preserve. Ownership of this site is subject to certain drainage easements which will be incorporated into the restoration plan so that the re-created seasonal pools will not be adversely affected by the up-gradient storm water runoff. The water quality of this storm water runoff will be tested to insure compatibility with the newly designed habitat.

3. Restoration Phasing

The restoration will be conducted in four phases, implementation of which will be the co-applicants' financial and managerial responsibility. Phase I is underway and involves the restoration of approximately 25 acres in the southern tip of the Stem parcel (southwest corner of site, adjacent to the existing N-1 channel and the railroad tracks). In the fall of 1998, 16 ponds were created at this location and are shown on Figure 6. During Phase I, pursuant to the Service's permit #TE-825572-1, agents for the co-applicants collected egg cyst-bearing soil from the Oklahoma pool and inoculated the re-created seasonal pools in the Stem parcel. Hatched tadpole shrimp were detected in the re-created pools in early January 1999 and gravid females were detected in the re-created ponds the following month.

Vernal pool tadpole shrimp reproduction will continue to be monitored in both the Oklahoma pool and in re-created pools until two additional successful tadpole shrimp reproductive seasons have been observed, or until ten years have passed, whichever is less. During this time, the Oklahoma pool, except for approximately 1.85 acres needed to construct Cushing Parkway in 1999 (see Figure 7), will be preserved to confirm the successful translocation of the vernal pool tadpole shrimp in Phase I. While the Oklahoma pool is preserved for this purpose, the co-applicants, in consultation with the Service, will be responsible for ensuring that the typical water level condition of the pool is maintained by reference to local rainfall records. Under normal rainfall conditions, the Oklahoma pool serves as suitable vernal pool tadpole shrimp habitat. Thus, in wet and normal years, the Service expects that the water levels within Oklahoma will be maintained at a depth and duration sufficient to support tadpole shrimp reproduction. In a dry year, the pool's water level will be correspondingly less and the pool may not pond sufficiently for tadpole shrimp reproduction. The co-applicants will be responsible for assuring that the Oklahoma pool has sufficient water under normal and above normal rainfall years to support such reproduction.

Phases II, III and IV, which will occur in 1999-2001, will include the restoration of the remainder of the on-site and Stevenson parcel Preserve Areas and will utilize the data collected from Phase I to adjust the design parameters and construction techniques as warranted. See Figure 8. The exact location of the remaining re-created seasonal pools and wetland habitat, as well as the final design parameters, will be determined by the co-applicants, and approved by the Service, prior to commencing restoration activities.

During all phases of restoration, all sensitive resources, including all seasonal pools and Contra Costa goldfields populations, will be flagged and sign-posted at the outer edge of their respective buffer areas.

4. Development Phasing

Grading in the development area will occur in two phases. In Phase I, development area "A," as depicted on Figure 9, will be developed and the Cushing Parkway will be constructed, including fill of approximately 1.85 acres of the Oklahoma pool for this purpose. This phase also includes the installation of an underground storm water drainage pipe (or pipes) that will be aligned in close proximity to the southern boundary of the existing Auto Mall Center, as generally depicted on Figure 9. When installing the pipe(s) through the middle of the Oklahoma pool, care will be taken to minimize disruption to the pool habitat. Nobel Drive, as generally depicted on Figure 9, may be constructed in Phase I, but Boscell Road, also generally depicted on Figure 9, will not be constructed until Phase II.

In Phase II, development area "B" will be developed upon completion of two additional seasons of successful reproduction by vernal pool tadpole shrimp in the Phase I Stem parcel or any other

project restoration ponds, as demonstrated by the presence of gravid female tadpole shrimp. Assuming that the next two reproductive seasons follow immediately on the success of the 1998/99 season, development area "B" would be available for development at the earliest in the winter/spring of 2001.

If the tadpole shrimp translocation project is not successful after two more wet seasons, the co-applicants, in their sole discretion, will either (1) withhold from developing development area "B" until a total of two additional reproductive seasons have been achieved, or (2) proceed with developing development area "B" and concurrently provide for the preservation and protection of habitat, approved by the Service, equivalent to that lost by filling the Oklahoma pool. Boscell Road may be constructed in 2001 without regard to the success of the tadpole shrimp translocation project as long as item (1) or (2), above, have been approved by the Service and implemented by the co-applicants.

5. Monitoring

The biological values that will be monitored in the Preserve Areas include populations of the vernal pool tadpole shrimp, the Contra Costa goldfields and their pollinators, the California tiger salamander, the burrowing owl, wetland resources, and the occurrence and persistence of native and non-native plant species. The monitoring protocol is as described in Section 8, pages 84 - 90, of the August 24, 1998 Ecosystem Restoration Plan, attached as Appendix B, and the Contra Costa Goldfields Monitoring Plan and Contra Costa Goldfields Pollinator Monitoring Protocol, (both attached in Appendix A). These protocols require ten years of monitoring (with certain exceptions) and will be funded by the co-applicants. The ten-year monitoring period will commence with completion of each respective phase of the restoration project, as depicted in Figure 8.

6. Management and Maintenance of the Preserve

At least 60 days prior to commencement of ground disturbing activities for Phase II of the restoration project, the co-applicants will submit to the Service and the Corps for review and approval a detailed Long Term Management Plan for the Preserve Areas. Together with the Ecosystem Restoration Plan (Stromberg *et al.* 1998, and attached as Appendix B), the co-applicants propose to call the combined plans the "Final Mitigation and Monitoring Plan." The Long Term Management Plan will address the following issues:

A. Funding: Prior to conveyance of the Preserve Areas to the adjoining Refuge, Catellus, acting on behalf of the co-applicants, will provide to the Service and the Corps documentation that (1) funds for the monitoring and perpetual maintenance of the Preserve Areas are available either through (i) an endowment account established for this purpose, or alternatively, (ii) a permanent Community Facilities

District established for this purpose pursuant to the Mello-Roos Community Facilities Act of 1982 (Cal.Gov.Code § 53311 et seq.); and (2) the Service has determined that the amount and mechanism of such funding is adequate and appropriate. Subject to the approval by the Solicitor's Office for the Department of the Interior, these funds will be made available to the San Francisco Bay Wildlife Society, or another appropriate entity approved by the Service, for the purpose specified in this paragraph in an agreement that will be in substantially the same form as Exhibit 2, Appendix C.

B. Restoration: The co-applicants will send a post-restoration construction compliance report prepared by the monitoring biologist to the Service within 60 calendar days of the creation of wetlands on both Preserve Areas following both Phase I and Phase II. These reports will detail: (1) dates that construction occurred; (2) a topographic map of the creation site as built, with adequate references or landmarks to precisely locate the mapped area; (3) pertinent information concerning any failures to fully meet goals; (4) known effects of construction on federally listed, proposed, or candidate species, if any; (5) known occurrences of incidental take of federally listed or proposed species, if any, by reason of construction; and (6) any other pertinent information regarding direct and indirect effects of construction.

C. Maintenance and Repair: The co-applicants will provide for routine maintenance such as debris removal and inspection and repair of fences, and access entries. Such inspections will begin monthly, to be increased or decreased as determined necessary in consultation with the Service.

D. No Vehicles: Except as needed for restoration, reconstruction and maintenance, in existing power line or other easements on the properties, or as necessary in emergency situations, non-motorized as well as motorized vehicles will be prohibited in the Preserve Areas.

E. Inspection: The co-applicants will provide that the Preserve Areas will be inspected every year for the first 10 years by a qualified wetlands specialist. The wetlands specialist will prepare a written report to the co-applicants, copied to the Service, regarding required maintenance practices, repairs, etc., necessary to ensure the continued wetlands functions and values. Until conveyed to the adjoining National Wildlife Refuge, co-applicants will allow reasonable access to the Preserve Areas with 24 hours notice upon request by the Service and the Corps for the purpose of determining compliance with this opinion.

F. Grazing: The co-applicants will include a grazing strategy for control of invasive plant species within the Preserve Areas, including a monitoring plan for these species. Uncontrolled grazing will not be allowed.

G. Inconsistent Activities: The co-applicants will insure that activities inconsistent with maintaining the suitability of the remaining wetland and upland habitat in the Preserve Areas are prohibited. These include, but are not limited to: (1) alteration of existing topography or any other alteration or uses for any purpose, including the exploration for, or development of mineral extraction; (2) placement of any new structures on the Preserve Areas; (3) dumping and/or burning of rubbish, garbage, or any other wastes or fill materials; (4) building of any new roads or trails, other than the Cushing Parkway authorized in this proposed action; (5) placement of storm water drains; and (6) use of pesticides and herbicides except those described herein that may be used by the Alameda County Mosquito Abatement District, or as may be specifically authorized by the Service, in accordance with all applicable laws.

Conservation Measures for Contra Costa Goldfields

The 391-acre on-site Preserve contains all the known populations of Contra Costa goldfields on the project site, and these populations will be avoided and preserved unmodified. To that end, a 250-foot buffer zone has been provided around all mapped populations of Contra Costa Goldfields, and the buffer zone will be marked and sign-posted. Additionally, a Contra Costa Goldfields Monitoring Plan and Pollinator Monitoring Protocol, both attached in Appendix A, will be implemented.

The Contra Costa Goldfields Monitoring Plan contains three elements. First, it provides for annual surveys for special status plant species commencing in Spring 1999 in the on-site Preserve following guidelines established by the California Native Plant Society and the California Department of Fish and Game (CDFG). During the surveys, any rare plant species occurrences will be documented, mapped, and flagged, and a California Native Species Field Survey Form will be completed and submitted to the Natural Diversity Database. In consultation with the Service, these rare plant species occurrences will be avoided in the restoration of the Preserve.

Second, in the event that a Contra Costa goldfields plant is observed in the Cushing Parkway right-of-way construction corridor during the Spring 1999 survey, the plant location will be flagged and mapped. Once the plant has gone to seed, seeds and associated plant material will be gathered by hand for inoculation into suitable habitat elsewhere in the Preserve. In addition, the top two to four inches of soil will be removed from the flagged area and placed in a separate suitable habitat location in the Preserve, one which does not currently contain rare plants. Finally, over a ten year period, the Contra Costa goldfields and any other rare plant species

discovered in the Preserve, if any, will be monitored each spring. During the monitoring the known locations will be visited and other suitable habitat, including recreated habitat, will be examined. Plant location and size will be recorded and mapped, and the size of plant subpopulations will be determined by counting the number of plants in several small quadrats (e.g., $0.5m^2$). An annual report showing the population size and distribution dynamics over time will be submitted to the appropriate agencies, and results from the surveys, along with any on-site corrective action measures that may be identified in consultation with the Service, will be integrated into the long-range management plan for the Preserve.

Additional monitoring will be provided under the December 11, 1998, Contra Costa goldfields Pollinator Monitoring Protocol, attached in Appendix A. That protocol describes the methods to be used to monitor the Contra Costa goldfields pollinator population in the Preserve, so that pollinators of Contra Costa goldfields can be identified and protected. The protocol calls for weekly surveys between March 1st and April 15th, 1999, followed by monthly (May to June) surveys inclusive of the 1999 blooming period of goldfields. Currently, it is believed that oligolectic bees in the Andrenidae family are the main Contra Costa goldfields pollinator; however, other insect visitors will be collected and studied. If the pollinator community is the Andrenid bees, as suspected, surveys will be conducted in the Preserve to locate nesting sites, and these sites will be avoided to the greatest extent possible. If nest sites do occur within an area that must be disturbed, either for habitat restoration purposes or for construction within the Cushing Parkway construction right-of-way, after consulting with the Service and any qualified scientists identified by the Service, the soil containing the nest site will be translocated within the Preserve in proximity to Contra Costa goldfields.

Conservation Measures for California Tiger Salamander

Catellus and CDFG have agreed that Catellus will acquire and preserve off-site lands for the mitigation of adverse project effects on the California tiger salamander. The co-applicants are treating the entire development site as salamander habitat, except for "barren" areas identified by CDFG as non-habitat. In accordance with CDFG policy, impacts to the California tiger salamander are being mitigated at a 1:1 acreage ratio with the purchase of off-site breeding and estivation habitat. The co-applicants will prepare a management plan for the acquired habitat lands.

The Preserve will protect some tiger salamander breeding habitat, and restoration and management actions in the Preserve will address salamander breeding ponds and upland estivation needs. The co-applicants are designing some of the restoration wetlands within the Preserve to provide enhanced habitat for the species. Pools will provide sufficient depth and duration of ponding to allow for reproduction by the salamander. Phasing of the restoration work, described under number 3, above, will moderate the impacts of grading on the species, and

will allow the translocation of salamanders caught in areas to be disturbed (for development or restoration) to preserved or previously restored habitat.

In addition, impacts to tiger salamanders within the Preserve are being reduced through a trapping and relocation program. During the 1998-99 wet season, approximately two miles of drift fence and 667 pitfall traps were installed. Prior to forecast storm events, traps were opened in late afternoon and checked the following morning. Traps were opened 34 times between January 16 and April 6, 1999. A total of 110 adult salamanders were captured from proposed development and wetland mitigation areas and relocated to known breeding pools in the Preserve area. In April and May, California tiger salamander larvae are being collected from pools in the development area and relocated to preserve pools. The trap system will be left in place and maintained until a permanent barrier is constructed to prevent salamander movement onto the development area. California tiger salamander populations in the Preserve Areas will be monitored annually during the ten-year post-construction monitoring period.

This concludes the biological conservation measures proposed by the co-applicants.

The conservation measures as proposed above and in the Ecological Restoration Plan (Stromberg *et al.* 1998) (Appendix B), the January 4, 1999, Memorandum and attachments from James T. Burroughs of Beveridge & Diamond, LLP, to the Service (Appendix A), and the Contra Costa Goldfields Monitoring Plan and Pollinator Monitoring Protocol, attached in Appendix A, hereby incorporated by reference, are considered part of the project evaluated by the Service in this biological opinion. Any change in these plans or their implementation that might adversely affect listed species, either directly or indirectly, requires reinitiation of consultation with the Service, as set forth in the final paragraphs of this letter.

Environmental Baseline/Species Accounts

Contra Costa goldfields

Contra Costa goldfields was listed as endangered on June 18, 1997 (62 FR 33029). It is a showy spring annual in the aster family (Asteraceae) that grows 10 to 30 centimeters (cm) (4 to 12 inches) tall and is usually branched. The leaves are opposite, light green, and usually have a feather-like arrangement with narrow clefts extending more than halfway toward the stem. The flowers are found in terminal yellow heads. The phyllaries are one-third to one-half fused; the achenes are less than 1.5 millimeters (mm) (0.06 inch) long and always lack a pappus. *Lasthenia conjugens* flowers from March to June. The partially fused phyllaries and the lack of a pappus distinguish this species from *L. fremontii* and *L. burkei*, which it otherwise closely resembles.

Habitat for Contra Costa goldfields consists of vernal pools in open grassy areas of woodland and valley grassland communities. Dains (1995) has suggested that Contra Costa goldfields plants prefer shallow vernal pools or vernal pool margins, and that the species' range of habitat includes marginal use of somewhat alkaline soils. Alkalinity and salinity were not distinguished in her study. Dains also reported that ryegrass (*Lolium multiflorum*) and other common non-native species can out-compete Contra Costa goldfields in the absence of grazing.

Historically, the species grew in vernal pool habitats in seven counties--Alameda, Contra Costa, Mendocino, Santa Barbara, Santa Clara, Napa, and Solano Counties, California. It has been extirpated from Mendocino, Santa Barbara, and Santa Clara Counties, by agricultural land conversion, urbanization, and creek channelization. Contra Costa goldfields is now found in 13 localized populations occurring in four general areas of Alameda, Contra Costa, Napa, and Solano Counties (California Native Plant Society (CNPS) 1978, California Natural Diversity Database (CNDDB) 1996). One population occurs in Contra Costa County; two in Napa County; and one in Alameda County. Nine populations are located in Solano County; eight of these clustered near the town of Fairfield and the ninth located on Travis Air Force Base. With the exception of Travis Air Force Base, all populations are on private lands.

Status of the Species in the Action Area

In the past, agricultural land conversion, urbanization, and associated developments have extirpated subpopulations of this species in Alameda County. (CNDDB 1993, 1996; CNPS 1978). However, Alameda County still contains important Contra Costa goldfields habitat. The adjacent San Francisco Bay National Wildlife Refuge, for example, has the largest known Contra Costa goldfields population in Alameda County, with 10 subpopulations, ranging from 100 to over 2,000 individual plants. The Contra Costa goldfields population on the Pacific Commons site is smaller, with five known subpopulations consisting of a total of 3,100 individual plants found in the southeast portion of the site, in and near seasonal pools. Most of the plants were found in modified wetlands near the old raceway/runway complex (ENTRIX 1997).

This population of Contra Costa goldfields is one of only three located south of San Pablo and Suisun Bays, and is one of only 2 known populations occurring in Alameda County. All of the 11 populations north of San Pablo and Suisun Bays are found on sites that are proposed for development. Because of the small number of populations of this species, protection of all remaining populations is necessary for the species' survival. Loss of this population would significantly reduce the range of the species and would reduce the amount of genetic material available which is critical for restoration and recovery activities.

Vernal pool tadpole shrimp

Vernal pool tadpole shrimp were formally listed as endangered on September 19, 1994 (59 FR 48136). These crustaceans are restricted to vernal pools and swales and other seasonal aquatic habitats in California. When their habitats fill with water during winter rains, and when undetermined environmental conditions are right, individuals emerge and develop rapidly to adulthood. Eventually the seasonal wetlands dry up, and tadpole shrimp survive the long dry season as resting eggs, or cysts, in the dried bottom mud. The cysts are capable of withstanding heat, cold, and prolonged dessiccation. When the pools refill in the same or subsequent seasons, some, but not all, of the cysts may hatch. The stock of cysts in the soil may include cysts from many years of breeding. The early stages of tadpole shrimp develop into adults over a period of one to two months (Helm 1998).

The vernal pool tadpole shrimp has dorsal compound eyes, a large shield-like carapace that covers most of the body, and a pair of long cercopods at the end of the last abdominal segment. Tadpole shrimp climb or scramble over objects, as well as plow along or in bottom sediments. Their diet consists of organic detritus and living organisms, potentially including fairy shrimp and other invertebrates. Tadpole shrimp require four or more weeks to complete their active life cycle, and so are found in longer-lived pools, which also tend to be larger or deeper. They prefer pools with open, muddy bottoms. The primary historic dispersal method for the vernal pool tadpole shrimp likely was large scale flooding that allowed the animals to colonize different individual vernal pools and other vernal pool complexes (J. King, pers. comm., 1995). This mode of dispersal currently is curtailed due to the construction of dams, levees, drainage, and other flood control measures, and widespread urbanization within significant portions of the range of this species. Waterfowl and shorebirds likely are now the primary dispersal agents for vernal pool tadpole shrimp (Bruses, in. litt., 1992, King, in. litt., 1992, Simovich, in. litt., 1992). The eggs of these crustaceans are either ingested and passed through the gut (Krapu 1974, Swanson et al. 1974, Ahl 1992) or adhere to the legs and feathers where they are transported to new habitats. Eng *et al.* (1990) and Simovich *et al.* (1992) provide further details on the life history and ecology of this species.

The vernal pool tadpole shrimp is known from about 20 populations, in the Central Valley from east of Redding in Shasta County south to the Sequoia Airfield in Tulare County, and the vernal pool complex on and around the San Francisco Bay National Wildlife Refuge and Pacific Commons properties in Fremont, Alameda County. The Fremont population is the only population in the Bay area, and is isolated from other known vernal pool tadpole shrimp populations by at least 30 miles. The historical distribution of the species is unknown, but is presumed to include areas of the Central Valley and around San Francisco Bay on suitable soils that have since been altered, primarily for agriculture and urban uses (Holland and Jain 1988, USFWS 1994).

The vernal pool tadpole shrimp is imperiled by habitat loss caused by a variety of human activities, primarily urban development, water supply and flood control projects, and conversion of land to agricultural use. Habitat loss occurs from direct destruction and modification of pools due to filling, grading, discing, leveling, and other activities, as well as modification of surrounding uplands which alters vernal pool watersheds. Other activities which adversely affect this species include off-road vehicle use, certain mosquito abatement measures, and pesticide/herbicide use. Only a small fraction of the habitat of this species is protected from these threats. Holland estimated that between 60 and 85 percent of the habitat that once supported vernal pools had been destroyed by 1973 (USFWS 1994). In the ensuing twenty-one years, a substantial amount of remaining habitat has been converted for human uses. The rate of loss of vernal pool habitat in the state has been estimated at two to three percent per year (Holland and Jain 1988).

The Sacramento District of the U. S. Army Corps of Engineers has several thousand vernal pools under its jurisdiction (Coe 1988). It has been estimated that by the year 2008, 60 to 70 percent of these will be destroyed by human activities (Coe 1988).

In addition to direct habitat loss, the vernal pool habitat for the vernal pool tadpole shrimp has been and continues to be fragmented throughout its range due to conversion of natural habitat by human activities. This fragmentation results in small isolated vernal pool tadpole shrimp populations. Commonly held ecological theory predicts that such populations will be highly susceptible to extirpation due to chance events or additional environmental disturbance (Soule 1987). Should an extirpation event occur in a population that has been fragmented, the opportunities for recolonization are reduced due to isolation from other (source) populations.

Status of the Species in the Action Area

Vernal pool tadpole shrimp have been found in seasonal ponds on the Pacific Commons site and at the Stevenson parcel. Life stages of the tadpole shrimp (eggs, juveniles, adults, or body parts) were found by wet and dry season surveys at 25 locations on the Pacific Commons site and one pool on the Stevenson site (Arnold 1997b). Evaluating habitat attributes for vernal pool tadpole shrimp, Belk and Arnold (1997) found good to low quality tadpole shrimp habitat at 71 pools (62.2 acres) on the proposed project site. In the Fremont/Newark area of Alameda County, breeding adults have also been observed in several ponds at the Warm Springs Unit of the Refuge (R. A. Arnold, pers. comm.). In studies conducted in 1997, shrimp egg cysts were found in 25 pools (Arnold 1997a, 1997b). As discussed above, these occurrences on the proposed project site and the near vicinity are a unique and geographically isolated population, and constitute the westernmost extent of the range of the species.

The 25 locations on the Pacific Commons site where evidence of tadpole shrimp was found include five ditches or drains that may not be habitat because of fast flushing flows after a storm

event. The remainder of the locations are scattered around the site, and the Service considers all wetlands on site with suitable hydrography and flows to be habitat of the species. The largest single wetland habitat feature is the Oklahoma pool (19.7 acres), which also supports the largest sub-population of vernal pool tadpole shrimp observed. Within the development footprint, there are approximately 36 acres of seasonal wetlands, of which Belk and Arnold (1997) judged 31 acres suitable for tadpole shrimp.

Tadpole shrimp appear to prefer pools with open, muddy bottoms. Several years without grazing as well as the recent colonization of the site wetlands by certain aggressive non-native species (*e.g.*, dallis grass--*Paspalum* sp.) appear to be causing an increase in vegetative cover, both living and dead, in tadpole shrimp habitat. A similar increase in cover in and around vernal pool habitat has been observed in the adjacent Warm Springs Unit of the Refuge. The impacts of this increasing cover on the species are difficult to predict precisely, but are likely to be negative.

Technical assistance regarding non-listed species

Also discussed in this document are the California tiger salamander (*Ambystoma californiense*), a candidate for Federal listing, and the burrowing owl (*Athene cunicularia*), a Federal species of concern in California. Both species occur on the proposed project site.

Effects of the Proposed Action

Contra Costa goldfields

Although no direct loss of occupied Contra Costa goldfields habitat is proposed to occur, degradation to goldfields habitat may result from long-term human disturbance, after nearby residential and industrial areas are developed, through impacts from herbicide or pesticide use, trash dumping, and uncontrolled off-road vehicle use. Off-road vehicle use and other recreational activities associated with humans can lead to wheel ruts, soil compaction, increased siltation, destruction of native vegetation, introduction of non-native vegetation, and an alteration of pool hydrology. Contra Costa goldfields relies on occupied on-site habitat as well as on surrounding upland areas that support pollinators. The Contra Costa goldfields has as its principal pollinators native solitary bees that are host-specific to the plant taxon. These pollinators, which are essential to the long term survival of this population of the goldfields, tend to nest in sparsely vegetated upland areas surrounding the vernal pools. Over time, degradation of the upland habitat may lead to reduced seed-set of the Contra Costa goldfields if solitary bees become more scarce and are replaced by less efficient, generalist pollinators. Transplantation of any solitary bee nests that are discovered during pollinator surveys is proposed, however, this technique is still experimental.

Vernal pool tadpole shrimp

The Pacific Commons project as proposed would result in permanent loss of 31 acres of seasonal wetland habitat for the vernal pool tadpole shrimp, 15 acres of other wetlands, and 446 acres of open space, including watershed areas. The project would permanently preserve 31.2 acres of seasonal wetland habitat for the vernal pool tadpole shrimp, 26.4 acres of other wetlands, and 391 acres of open space in the on-site Preserve, as well as 7.3 acres of wetlands and 53 acres of open space on the Stevenson parcel. Approximately 0.9 acre of ditches with some habitat potential for the species would be filled by the proposed restoration work, with an additional 1.1 acres of ditches to be considered for filling at a later date. The project would re-create 31 acres of seasonal pools suitable for the vernal pool tadpole shrimp and 38 acres of other wetlands in the on-site Preserve, and an additional 8 acres of seasonal pools suitable for the tadpole shrimp on the Stevenson parcel. The co-applicants also propose to develop and fund a management program for the Preserve Areas, acceptable to the Service, which would implement monitoring, grazing, and maintenance measures that would benefit the species in the Preserve Areas (see Biological Conservation Measures section, above).

The proposed action would also temporarily increase construction-related disturbance in proximity to vernal pool tadpole shrimp habitat, from both development and restoration. These ground-disturbing activities may result in erosion and deposition of sediment in seasonal pools, potentially burying tadpole shrimp eggs or adversely affecting water chemistry. Vehicles and heavy equipment maneuvering out-of-bounds could cause unanticipated compaction of seasonal pool bottoms, crushing of tadpole shrimp eggs, and disturbance of seasonal pool watersheds. Chemical spills and leaks from construction machinery or materials may contaminate soils or waters with adverse effects on the species.

Excessive vegetative growth and thatch accumulation in the Preserve Areas could degrade habitat quality for the vernal pool tadpole shrimp, which prefers pools with little bottom vegetation. Aggressive non-native plant species are primarily responsible for the dense cover seen on the site at the present time. Invasive non-native plant populations on the project site could also spread into the adjacent Refuge and threaten tadpole shrimp habitats there.

Technical assistance regarding non-listed species

Also discussed in this document are the California tiger salamander (*Ambystoma californiense*), a candidate for Federal listing, and the burrowing owl (*Athene cunicularia*), a Federal species of concern in California. Both species occur on the proposed project site.

Cumulative Effects

Cumulative effects are those impacts of future non-Federal (State, local government, and private) actions on endangered and threatened species or critical habitat that are reasonably certain to occur within the action area. Future Federal actions will be subject to the consultation requirements of section 7 of the Act and, therefore, are not considered cumulative to the proposed action.

Because the vernal pool tadpole shrimp is endemic to vernal pools in the Central Valley and the immediate vicinity of the project site in the Bay area of California, the Service anticipates that a wide range of activities will affect the species. Such activities include, but are not limited to, urban, water, flood control, highway and utility projects, chemical contamination, and conversion of vernal pools to agricultural use. Many of these activities will be reviewed under section 7 of the Act as a result of the Federal nexus provided by section 404 of the Clean Water Act. These actions constitute future Federal actions that are unrelated to the proposed action. However, an undetermined number of future projects that alter the habitat of the vernal pool tadpole shrimp, likely will be not be subject to these permitting processes and, as such, are cumulative to the proposed project.

The Contra Costa goldfields exists on Federal, State, local and privately owned land in Alameda, Contra Costa, Solano and Napa Counties. The Service anticipates that populations of Contra Costa goldfields will continue to experience human impacts from habitat loss and other activities, as well as impacts from degradation of habitat caused by invasive non-native plant species. Many of these activities will be reviewed under section 7 of the Act as a result of the Federal nexus provided by section 404 of the Clean Water Act. These actions constitute future Federal actions that are unrelated to the proposed action. However, an undetermined number of future projects that alter the habitat of Contra Costa goldfields, likely will be not be subject to these permitting processes and, as such, are cumulative to the proposed project.

Conclusion

After reviewing the current status of the species, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, it is the Service's biological opinion that the Corps' issuance of a Clean Water Act section 404 permit, for filling of wetlands by the project as proposed, including the proposed biological conservation measures, is not likely to jeopardize the continued existence of the Contra Costa goldfields or the vernal pool tadpole shrimp. No statutory critical habitat has been designated for these species, therefore, none will be affected.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct. Harass is defined by the Service as actions that create the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by impairing behavioral patterns including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking provided that such taking under the Act is in compliance with this Incidental Take Statement.

The measures described below are non-discretionary, and must be implemented by the Corps so that they become binding conditions of any grant or permit issued to the applicants, in order for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps: (1) fails to require the applicants to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the applicant must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement. [50 CFR §402.14(I)(3)]

Sections 7(b)(4) and 7(o)(2) of the Act do not apply to the incidental take of listed plant species. However, protection of listed plants is provided to the extent that the Act requires a Federal permit for removal and reduction to possession of endangered plants from areas under Federal jurisdiction, or for any action that would remove, cut, dig, up, or damage or destroy any such species on any other area in knowing violation of any regulation of any State law or in the course of any violation of a State criminal trespass law.

Amount or Extent of Take

The Service anticipates that vernal pool tadpole shrimp may be taken as a result of the proposed action, and that this take will be difficult to quantify due to the variable, unknown size of the resident population over time (including resting cysts), and the difficulty of finding dead or

impaired specimens. However, take of the species can be defined by loss or damage of habitat. In such situations, the Service estimates the level of take in terms of acreage of habitat loss.

The Service anticipates that an unquantifiable number of vernal pool tadpole shrimp, in all life stages, may be killed in up to 31 acres of wetland breeding habitat, and associated watersheds, wetlands and uplands providing ecosystem functions, within the proposed development area as mapped in Figure 1. This take would occur in two development phases as described in the project description, and the extent of take in the second phase (more than 20 acres of wetland breeding habitat) is conditional upon the success of vernal pool tadpole shrimp restoration efforts in the Preserve Areas. There is also potential for take of the tadpole shrimp in the Preserve Areas, due to known, accidental or unforseen impacts of the restoration actions on the species. The Service anticipates that an unquantifiable number of vernal pool tadpole shrimp, in all life stages, may be killed in up to 2 acres of ditches and drains proposed for filling within the proposed Preserve Areas. Grading and earth-moving, sedimentation, contamination, and unauthorized operation of vehicles out-of-bounds as a result of the restoration activities may harm or kill tadpole shrimp in 31.2 acres of wetland breeding habitat, and associated watersheds, wetlands and uplands providing ecosystem functions, within the proposed on-site Preserve, and 7.3 acres of wetland habitat, and associated watersheds, wetlands and uplands providing ecosystem functions, within the Stevenson parcel.

With implementation of the following reasonable and prudent measures, below, incidental take associated with the Pacific Commons project and related ecological restoration actions, as described above, will become exempt from the prohibitions on take under section 9 of the Act.

Effect of the Take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the vernal pool tadpole shrimp, or destruction or adverse modification of critical habitat.

Reasonable and Prudent Measures

The Service believes that the following reasonable and prudent measures are necessary and appropriate to minimize the impacts of take on the vernal pool tadpole shrimp due to the project:

1. Minimize the long-term impacts of habitat loss due to the Pacific Commons project on the Fremont/Newark population of the vernal pool tadpole shrimp.

2. Minimize the long-term impacts of operation and maintenance of the Pacific Commons project on the vernal pool tadpole shrimp.

3. Minimize the short-term impacts of construction of the Pacific Commons project and associated ecosystem restoration actions on the vernal pool tadpole shrimp.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the Corps must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are nondiscretionary.

The following terms and conditions implement the corresponding reasonable and prudent measures above:

1. a. The Biological Conservation Measures, as proposed by the co-applicants and detailed in the biological opinion portion of this document (pages 4-10, above) are hereby incorporated as terms and conditions of this consultation and must be implemented. The Biological Conservation Measures call for implementation of (I) the Ecosystem Restoration Plan (Stromberg *et al.*1998), which is attached as Appendix B and hereby incorporated by reference, and (ii) the Long-Term Management Plan, required pursuant to paragraph 1(f) of these terms and conditions. Collectively, the Ecosystem Restoration Plan and the Long-Term Management Plan constitute the co-applicants' "Final Mitigation and Monitoring Plan" for the proposed action. In the event of any inconsistency with the co-applicants' Biological Conservation Measures or the Final Mitigation and Monitoring Plan, the terms and conditions of this incidental take statement, below, shall have precedence. The amount of wetlands re-created plus existing in the Preserve Areas, within construction tolerances, should not exceed the amount proposed.

   b. Within 30 days of issuance of this biological opinion and before breaking ground on any portion of the project, the landowner shall provide an exclusive, irrevocable, legally binding offer to convey fee title of the Preserve Areas to the San Francisco Bay National Wildlife Refuge Complex. The offer must be in a form approved by the Service.

   c. Prior to any ground breaking, including all lots, roads, or utility construction, the permittee(s) will protect the Preserve Areas via deed restrictions in substantially the same form as Exhibit 3 in Appendix C, subject to approval by the Service and the Corps. These deed restrictions shall remain in place until term and condition 1d below is met (conservation easement on the Preserve Areas). If this deed restriction is lifted prior to recordation of the conservation easement, all ground breaking and project construction, including lots, roads, and utility construction, must cease, until

the appropriate agency-approved deed restrictions are reinstated, or term and condition 1d is met.

d. A Service-approved conservation easement or easements shall be placed on the Preserve Areas, for the protection of vernal pool tadpole shrimp and their habitat in perpetuity from further development. This easement or easements must be recorded within ninety (90) days of the issuance of any Corps permit for the proposed project, or as may be extended at the discretion of the Service. The easement must include, but not be limited to, provisions and responsibilities of the permittee(s) for the protection of the Preserve Areas including anticipated future transfers of the easement or fee interest. The easement shall include a list of prohibited activities that are inconsistent with the maintenance of the natural areas on site, including, but not limited to: (1) any alteration or use for any purpose other than the restoration and enhancement of the native ecosystem, including the exploration for, or development of mineral extraction; (2) placement of any new structures other than Cushing Parkway; (3) dumping or burning of rubbish, garbage, or any other exogenous wastes or fill materials; (4) building or improvement of any roads or trails other than Cushing Parkway; (5) killing, removal, alteration, or replacement of any existing native vegetation other than that consistent with Service-approved restoration and management plans; (6) placement of storm water drains other than the culverts under Cushing Parkway, unless approved by the Refuge and the Sacramento Fish and Wildlife Office (SFWO); (7) fire protection activities not required to protect human life or structures around the project site or natural resource values on the site or the adjoining Refuge; and (8) use of pesticides and herbicides other than that consistent with Service-approved restoration and management plans. The Service must be provided with a true copy of the recorded conservation easement within 30 days of its recordation.

e. Before breaking ground on any portion of the proposed Cushing Parkway that runs through the Preserve, the final design of Cushing Parkway—with respect to culverts, footprint, construction-related impacts (*e.g.*, staging areas), and passage underneath the elevated section between portions of the Preserve—must be reviewed and approved by the Service.

f. Within forty-five (45) days of issuance of this biological opinion, the Catellus Development Corporation must finalize its Long-Term Management Plan for the Preserve Areas. The Long-Term Management Plan shall be binding until transfer of the Preserve Areas to the Refuge, and discretionary thereafter, with the exception that the plan must identify and secure adequate funding for the necessary management of the Preserve Areas in perpetuity. The Long-Term Management Plan

must provide for essential management needs, such as non-native vegetation control, accessibility under the elevated portion of Cushing Parkway, control of trespassers, criteria by which the success of management will be judged, and contingency conservation actions in the event that the success criteria cannot be achieved by the permittees prior to transfer of the Preserve Areas to the Refuge. Contingency actions should include, but not be limited to, acquisition and restoration of habitat occupied by the listed species and reintroduction of extirpated populations. The Long-Term Management Plan must be acceptable to and approved by the Service.

g. 1. Within 30 days of issuance of this biological opinion, remove thatch (fallen dead plant material) and other living or dried standing herbaceous plant material, to a height of 4 inches, from in and around seasonally ponded wetlands. Plant materials must be removed within the wetland boundaries and to a distance of 50 feet around the jurisdiction or estimated boundary. This term and condition applies to all wetlands (not only Corps- delineated or jurisdictional wetlands) that held water for more than 5 weeks during the wet season of 1997-1998, in both Preserve Areas, except the wetlands containing Contra Costa goldfields or pickleweed (*Salicornia* sp.) The co-applicants and the equipment operator must confer with CDFG regarding protective measures for California tiger salamanders and burrowing owls before cutting. Subject to any restrictions placed by CDFG, all areas meeting the criteria above where cutting equipment can safely go must be cut.

2. Within 30 days of issuance of this biological opinion, cut and remove plant material in a 200-foot wide swath along the Refuge boundary. Confer with CDFG regarding protective measures for California tiger salamanders and burrowing owls before cutting.

3. Within two (2) weeks of issuance, provide to the Service a list or map of all wetlands and areas to be cleared of vegetation and thatch in accordance with 1.g.1 and 1.g.2 above. Within six (6) weeks of issuance, report to the Service the status of completion of these items.

4. Areas with existing Contra Costa goldfields plants (crosshatched area in Figure 10) must also be cut and the cuttings removed, but only after at least 95 percent of flowering heads have lost or matured seed. Cutting of the Contra Costa goldfields area may be completed after issuance of the Corps' 404 permit.

h. The co-applicants' plan for filling the N-1 channel within the Preserve must be reviewed and approved by the Service.

i. Monitoring of vernal pool tadpole shrimp, wetland functions and biodiversity, and non-native species in the Preserve Areas must be provided for ten years without exception in the Final Mitigation and Monitoring Plan.

j. During the ten-year restoration and monitoring period and any extension thereof, the co-applicants must designate a "Preserve Operator" to the Service and the Corps. The Preserve Operator will serve as the primary contact for the agencies in matters of preserve operation, condition, maintenance, monitoring, and access. Written notice of the identity and contact information of the Preserve Operator, and of any change in the Preserve Operator, shall be provided to the SFWO and to the Refuge (addresses below) by January 15, 2000, and within 30 days of any change.

k. At the time that the ownership and management of the Preserve Areas is transferred to the Refuge, all relevant accumulated information and survey results concerning the Preserve Areas should be provided to the Refuge.

2. a. (i) Drainage from the Pacific Commons developed areas adjacent to the Preserve must be prevented from adversely affecting the sustainable function of the preserved ecosystems. (ii) Waters allowed to flow onto the Stevenson parcel pursuant to existing drainage easements must be prevented from adversely affecting the sustainable function of the preserved ecosystems. Drainage onto the site must be tested, treated, and monitored to insure compatibility with the purposes of the preserve. These procedures must be reviewed and approved by the Service. Testing, treatment, and monitoring procedures must be reviewed again five years after issuance of this opinion, and again prior to transfer of ownership, with the Refuge and the SFWO.

b. To prevent the spread of invasive non-native plants into the Preserve, plants contained on the California Exotic Plant Pest Council List of Invasive Plants will be barred from use within the landscaping of the Pacific Commons development areas. This information must be supplied to all property buyers in the development. A list of native plants suitable for landscape use should be provided to property buyers. The Refuge must be given the right to require landowners or the City of Fremont to remove any landscape plants that threaten the ecosystems of the Preserve or Refuge.

c. In collaboration with Refuge personnel, develop and implement measures to regulate access to the Preserve Areas from the surrounding developed areas.

3. a. Sensitive resources and construction boundaries must be fenced or staked, flagged, and signed. Construction personnel must be notified of endangered species and their habitat at the site, and instructed on avoidance requirements and responsibilities.

b. Sedimentation of wetland habitats due to erosion from construction sites must be prevented, using erosion-prevention and sediment-trapping methods.

c. A qualified biological monitor must inspect the site daily during all ground-disturbing activities, including grading and earth-moving associated with (i) restoration activities, (ii) construction of Cushing Parkway across the Preserve, and (iii) development within the development area within 200 feet of the Preserve boundary.

1. The biological monitor shall have the authority to stop any work that threatens habitat of vernal pool tadpole shrimp, infringes on the Preserve Areas, or deviates significantly from the project described in this biological opinion. See "Reporting Requirements" below, for responsibilities to report such incidents.

2. Sediment runoff at the site must be checked by the biological monitor as part of the daily inspections. In addition, the biological monitor shall inspect the adequacy of sediment containment throughout the site within 18 hours of any rainfall event exceeding one-half inch in the preceding 24-hour period, even if no construction is in progress on the site, if soils bared by project activities are present. The biological monitor shall have the authority to judge the adequacy of sedimentation-prevention methods in use on-site, and to require additional safeguards against sedimentation as needed.

3. The biological monitor shall check for and call for corrective measures for any spills, leakage, or inappropriate storage of potentially toxic or hazardous materials that could contaminate waters or preserved areas.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize incidental take that might otherwise result from the proposed action. With implementation of these measures, the Service believes that no more than 31 acres of vernal pool tadpole shrimp habitat will be taken. If, during the course of the action, this minimized level of incidental take is exceeded, such incidental take would represent new information requiring review of the reasonable and prudent measures provided. The Corps must then immediately

provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

Reporting Requirements

Project personnel shall be required to report immediately any information about take or suspected take of listed species. The Service shall be notified within twenty-four (24) hours of the finding of any unanticipated harm to vernal pool tadpole shrimp or their habitat associated with the proposed action. The Corps must notify the Service within one working day of any such information. Provide the date, time, and precise location of the incident/specimen(s), and any other pertinent information. Service contacts are the Office of Ecological Services, Endangered Species Division, at (916) 979-2752, and the Division of Law Enforcement, Burlingame Office, at (415) 876-9078. Deposit any tadpole shrimp found dead in the Entomology Section of the California Academy of Sciences in San Francisco. The Academy's contact is the Senior Curator at (415) 750-7239.

Provide copies of the Contra Costa pollinator monitoring results and the Spring 1999 Contra Costa goldfields survey results to the Service within 45 days of completion of the surveys. Provide yearly Contra Costa goldfields survey updates to the Service by December 31 of each year for the duration of the 10-year monitoring period. Provide copies of annual reports on the status and progress of the restoration actions to the Service by December 31 of each year.

Address reports and correspondence to:

<u>before August 13, 1999</u>
U. S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Endangered Species Division
3310 El Camino, Suite 130
Sacramento, CA 95821-6340

<u>after August 13, 1999</u>
U. S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Endangered Species Division
2800 Cottage Way, West Wing, 2nd Floor
Sacramento, CA 95825

San Francisco Bay National Wildlife Refuge Complex
P.O. Box 524
Newark, CA 94560

street address for express deliveries
San Francisco Bay National Wildlife Refuge Complex
1 Marshlands Road
Fremont, CA 94536

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Endangered Species Act directs Federal agencies to use their authorities to further the purposes of the Act, by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities that further the purposes of the Act, such as preservation of endangered species habitat, implementation of recovery actions, or development of information and data bases.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations. We have the following recommendations:

1. The Preserve Operator should coordinate grazing, vegetation management, restoration and other management actions on the Preserve Areas with the Refuge.

2. Except where hydrological barriers already exist, grading and vernal pool re-creation within the Preserve Areas should be prohibited within 250 feet of existing Contra Costa goldfields populations.

3. In consultation with the Service, the co-applicants should develop and implement a strategy to spread small amounts of Contra Costa goldfields seed, collected on-site, into restored portions of the Preserve Areas.

4. The Final Mitigation and Monitoring Plan should contain contingency actions in the event that plant surveys or other observations detect a decline in the number of Contra Costa goldfields or in the area the plants occupy. Reference sites, including the adjacent Refuge, may be used to evaluate the significance of any decline, but change relative to reference need not be the sole criterion for taking action—for example, contingency action is warranted if the goldfields is extirpated from the site, even if reference populations also show a severe decline. Contingency actions should include acquisition of occupied habitat and restoration of extirpated populations.

5. Use wick applicators to apply any herbicides to be used within 10 meters (33 feet) of living Contra Costa goldfields plants. Sprayed applications beyond 10 meters should only be performed when winds are completely calm (imperceptible to the operator and other personnel).

6. Continue to coordinate closely with the Service and CDFG to minimize impacts to California tiger salamanders and native pollinators, and to restore and enhance their populations in the Preserve Areas. Provide management goals and actions for the salamanders and native pollinators in the Final Mitigation and Monitoring Plan, including enhancement of estivation and nesting sites.

7. Re-vegetate areas graded during the restoration promptly and aggressively with native plants appropriate to the area. Only local stock (radius of two miles) should be used. For the Final Mitigation and Monitoring Plan, develop a list or lists of plant species for seeding or planting into areas that would be disturbed by the restoration plan, both wetland and upland. Native species should be dominant in the mix; any non-natives included should be sterile or non-aggressive, and preferably already represented throughout the site. Even though the site is currently dominated by non-native species, recent research suggests supplemental seeding can significantly alter the species composition and dominance structure of some grassland plant communities (Tilman 1997). Coordinate with the Refuge regarding appropriate native plants to reintroduce from the adjacent Refuge into the Preserve Areas.

8. Provide management goals and actions in the Final Mitigation and Monitoring Plan to eradicate or control significant invasive non-native plants.

9. Establish, post, and provide enforcement of a speed limit of 35 to 40 miles per hour on Cushing Parkway to reduce the risk of road kill to burrowing owls, migratory waterfowl, shorebirds, and other wildlife.

10. No work may be performed on the Refuge without the review, approval, and appropriate permitting of the Refuge and the SFWO.

REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the proposed Pacific Commons project. As provided in 50 CFR §402.16, re-initiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals that the

agency action may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the project is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Please contact David Wright (animals) at (916) 979-2752 or Elizabeth Warne (plants) at (916) 979-2710, if you have questions regarding this document.

Sincerely,

Cay C. Goude

Cay C. Goude
Acting Field Supervisor

Enclosures

cc: PARD (ES), Portland, OR
Marge Kolar, SFBNWRC, Newark, CA
Carl Wilcox, CDFG, Yountville, CA
Caitlin Bean, CDFG, Santa Cruz, CA
Rebecca Tuden, EPA, San Francisco, CA
Dale Bowyer, RWQCB, Oakland, CA
Don Little, Catellus Development Corp., San Francisco, CA

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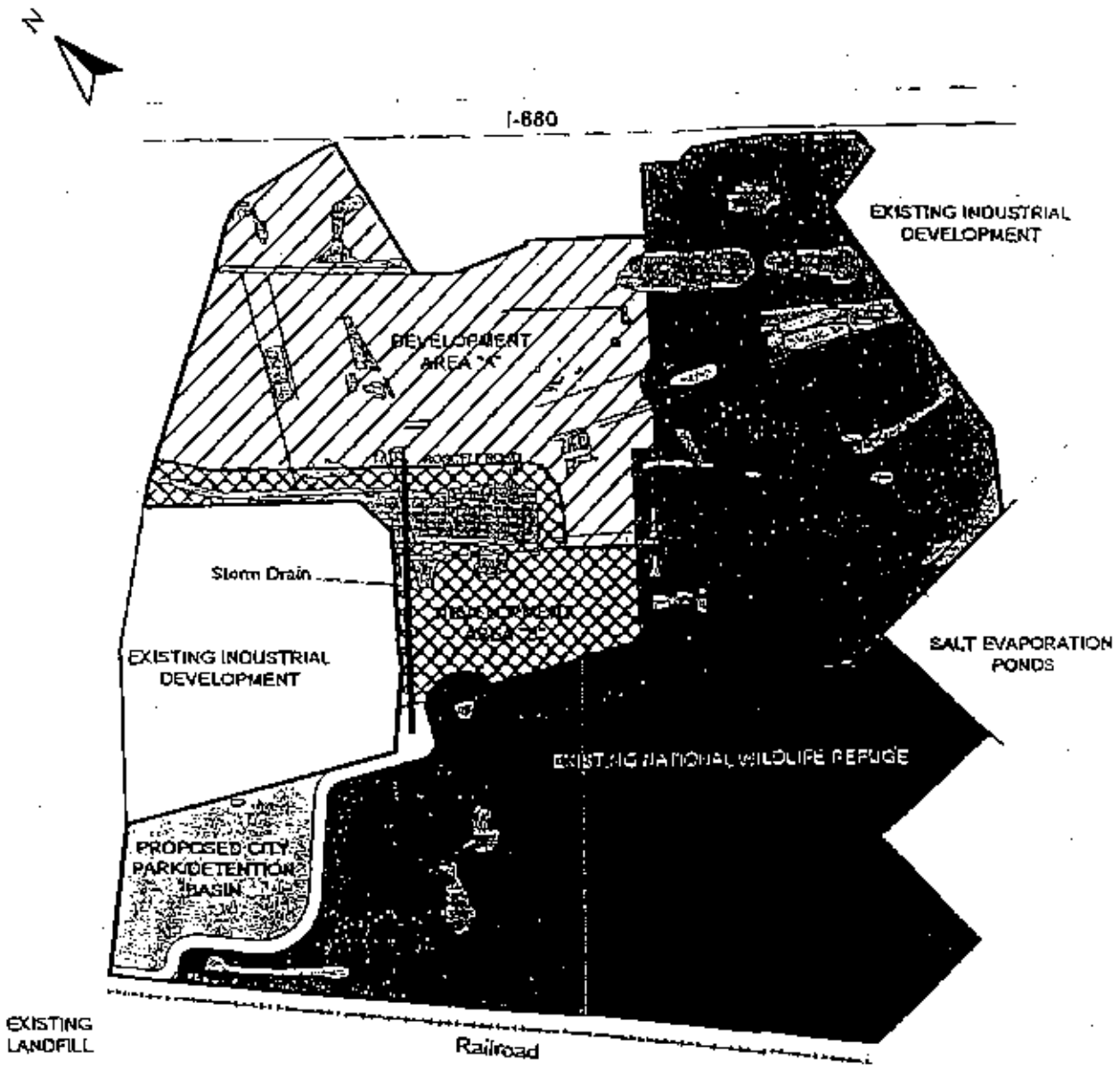
391-ACRE REFUGE ALTERNATIVE



LEGEND

- SEASONAL WETLANDS
- GOLDFIELD POPULATIONS
- PROPOSED CITY PARK/ DETENTION BASIN
- PRESERVE AREAS
- EXISTING NATIONAL WILDLIFE REFUGE
- AREA REPRESENTING 10 ACRES

391-ACRE REFUGE ALTERNATIVE
Pacific Commons Project Site
Fremont, California

750 0 750 1500 FEET

Figure 1

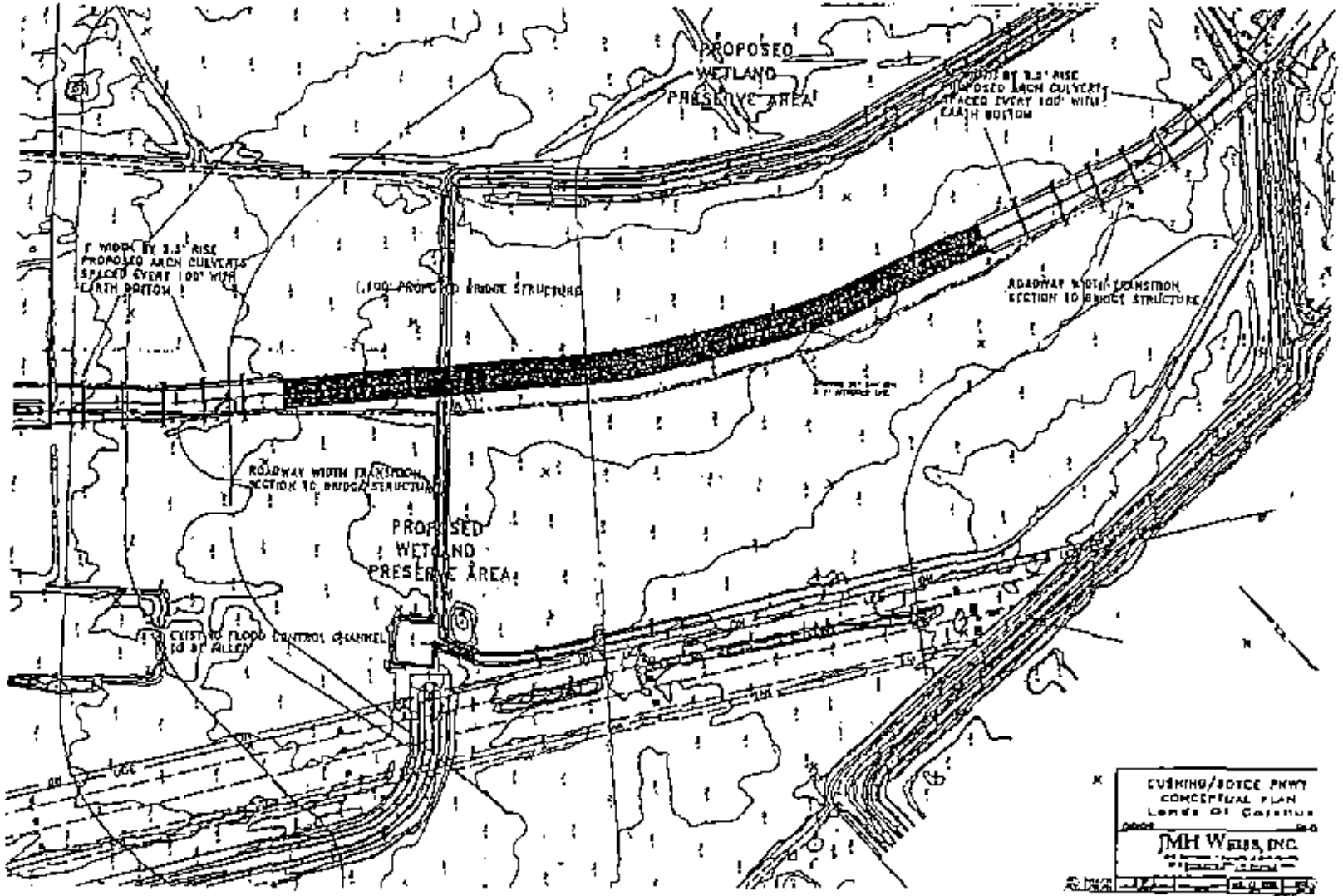


Figure 2

PURPOSE: Construction

DATUM: NGVD

ADJACENT PROPERTY OWNERS:
See Application

SOURCE: JMH WEISS INC.

CUSHING PARKWAY: CONCEPTUAL PLAN

212 0 212 424 FEET

SCALE 1:6088

City of Fremont & Catellus Devel. Corp.

39700 Civic Center Drive
Fremont, CA 94538
510-494-4802

201 Mission Street
San Francisco, CA 94105
415-974-4500

Pacific Commons Project

LOCATION: Auto Mall Parkway and Highway 880

COUNTY: Alameda

APPLICATION BY: City of Fremont and Catellus Development Corporation

SHEET: 19 OF 22 DATE: September 1998

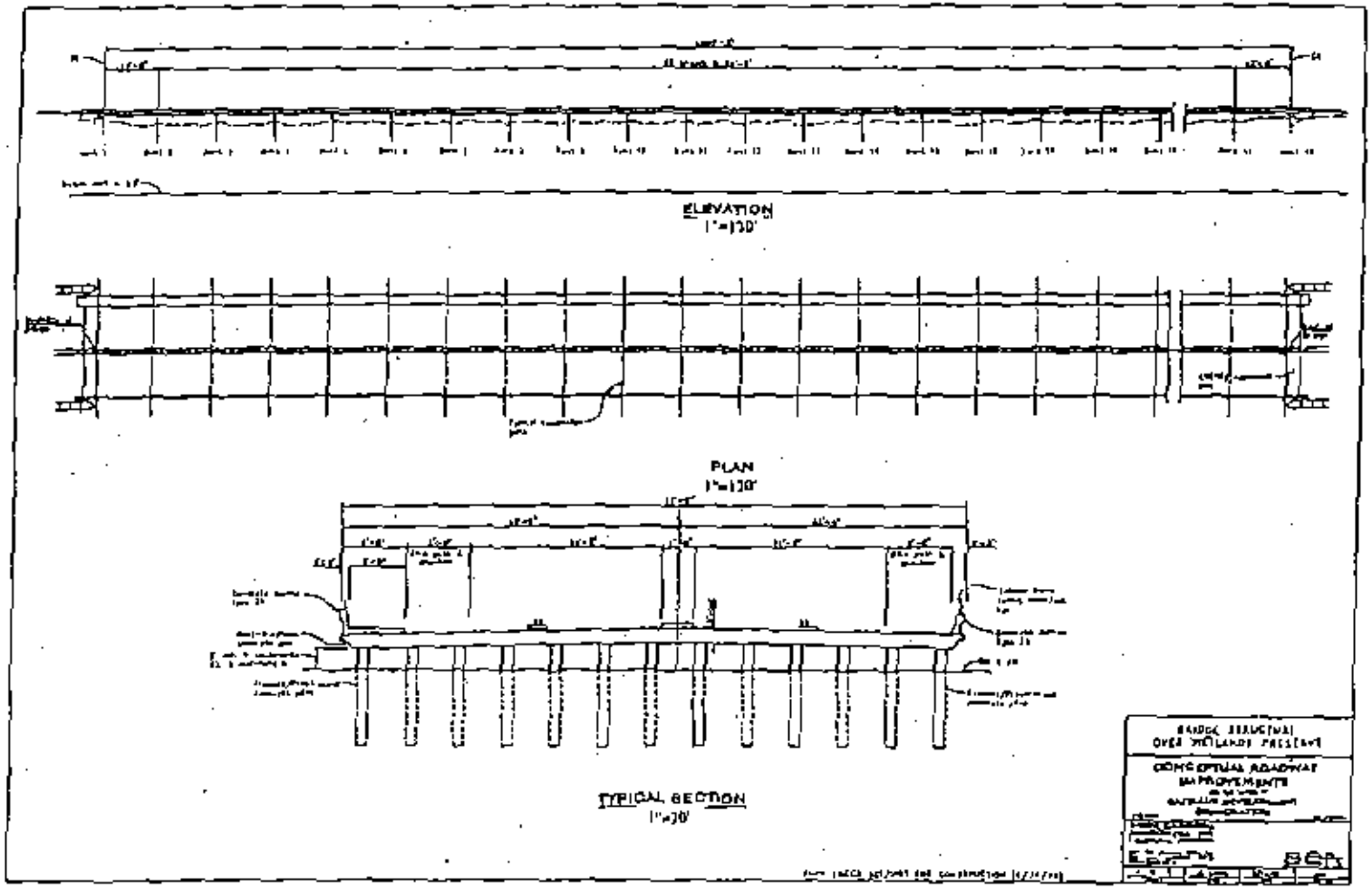
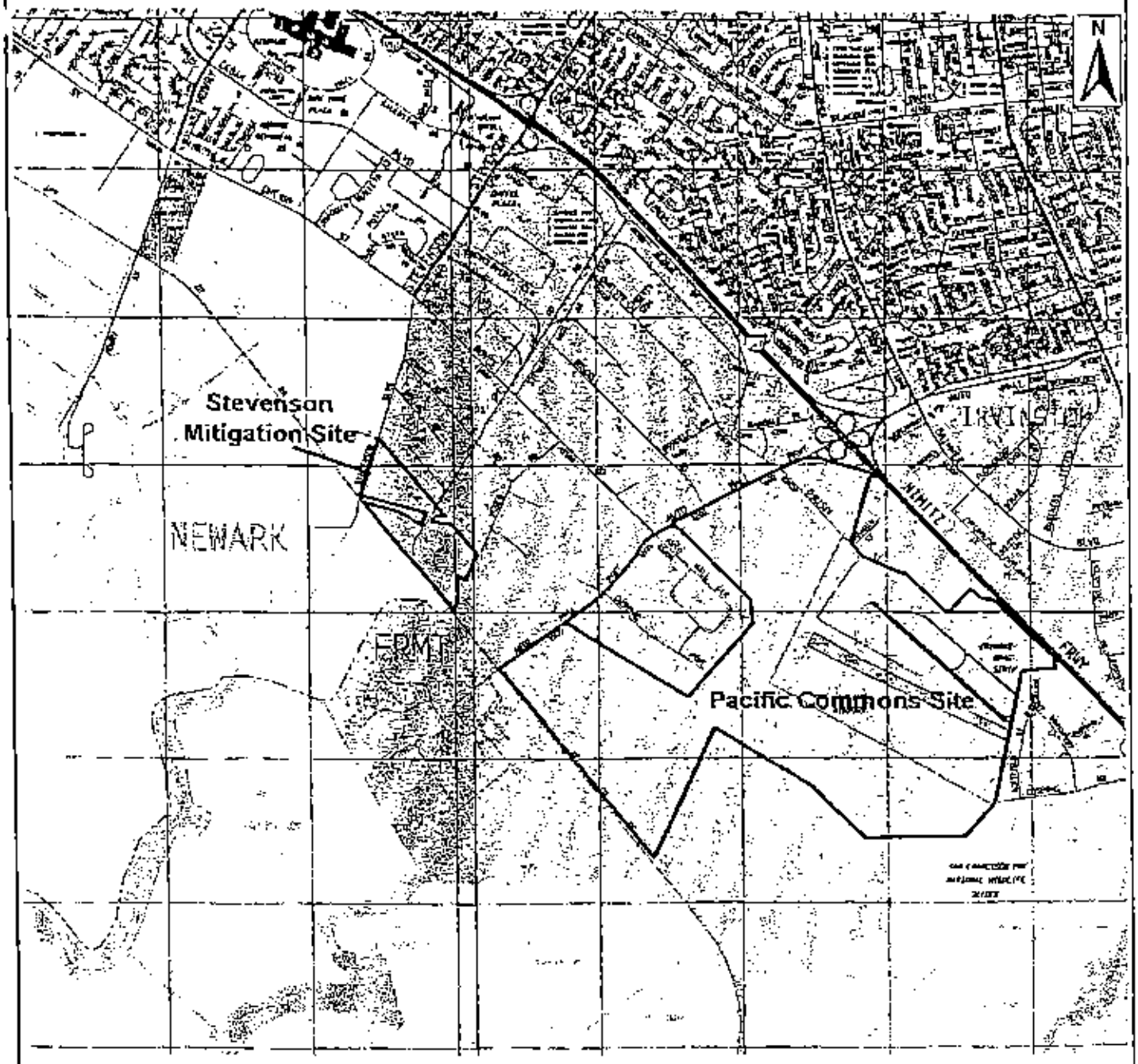


Figure 3

PURPOSE: Construction DATUM: NGVD ADJACENT PROPERTY OWNERS: See Application SOURCE: JMH WEISS INC.	CUSHING PARKWAY: BRIDGE STRUCTURE OVER WETLANDS PRESERVE SCALE AS SHOWN City of Fremont & Catellus Devel. Corp. 39700 Civic Center Drive, Fremont, CA 94538, 510-494-4802 201 Mission Street, San Francisco, CA 94105, 415-974-4500	Pacific Commons Project LOCATION: Auto Mall Parkway and Highway 880 COUNTY: Alameda APPLICATION BY: City of Fremont and Catellus Development Corporation SHEET: 28 OF 82 DATE: September 1998

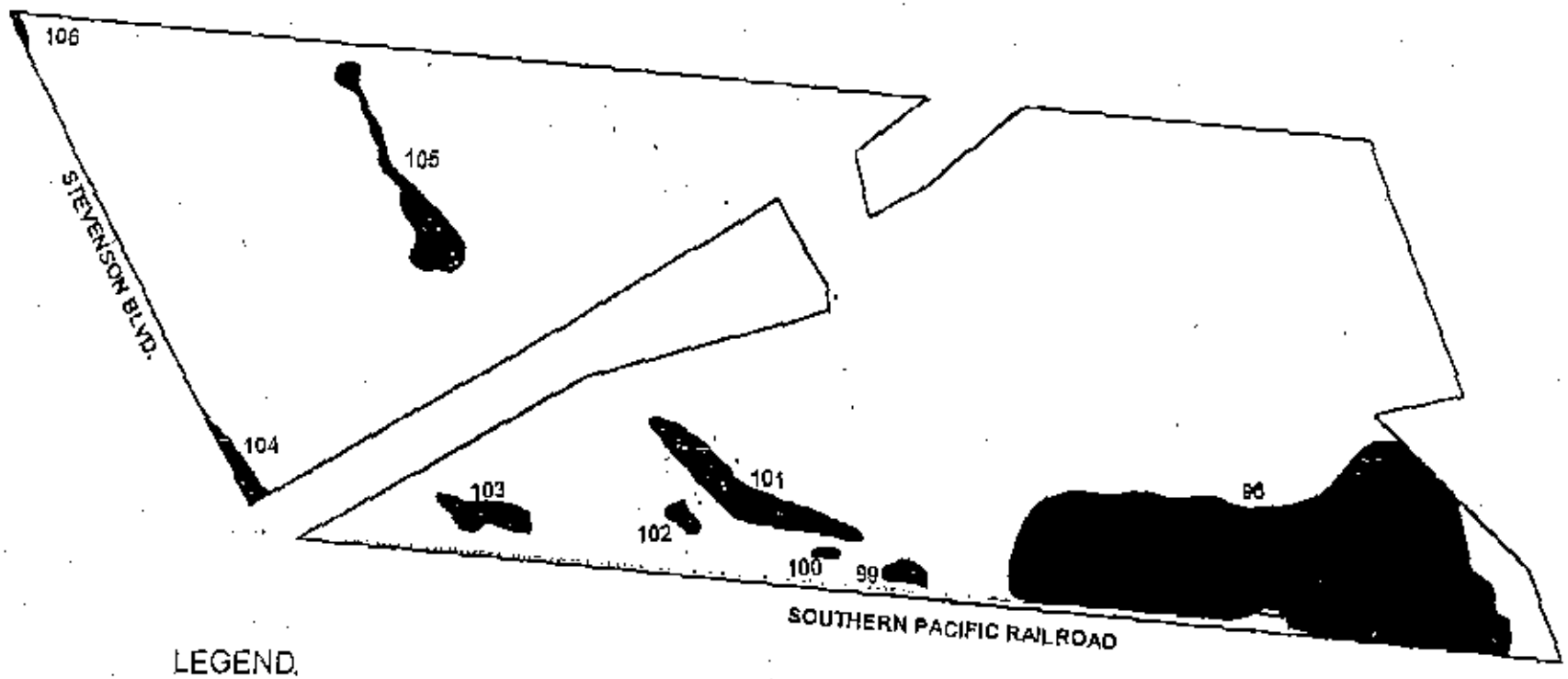


REGIONAL MAP
STEVENSON MITIGATION SITE

Pacific Commons Project
Fremont, California
January 1999

1375 0 1375 2750 FEET

Figure 4



LEGEND.

Seasonally Ponded Wetlands
(ACOE Jurisdiction)

Figure 5

PURPOSE: Construction

DATUM: NGVD

SOURCE:

Environmental Science Associates, Inc.

* Two acres of this site near pool 108 are reserved by the City of Fremont for a municipal facility.

STEVENSON MITIGATION SITE

175 0 175 350 FEET

SCALE 1:4200

City of Fremont & Catellus Devel. Corp.
39700 Civic Center Drive
Fremont, CA 94538
510-494-4602

201 Mission Street
San Francisco, CA 94105
415-974-4500

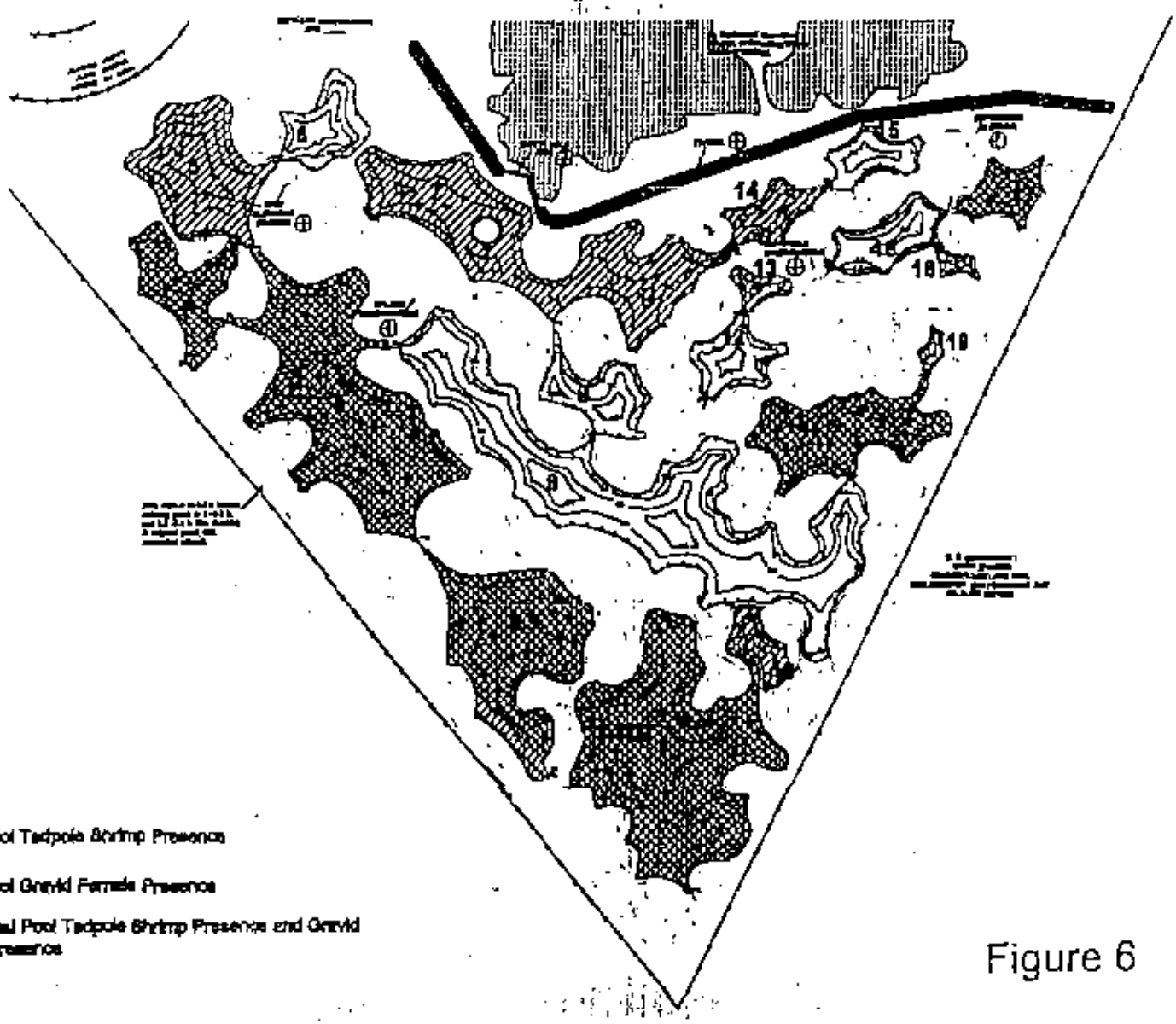
Pacific Commons Project

LOCATION: Auto Mall Parkway and Highway 880

COUNTY: Alameda

APPLICATION BY: City of Fremont and Catellus Development Corporation

SHEET: 4 OF 10 DATE: August 1998



Vernal Pool Tadpole Shrimp Presence

Vernal Pool Gravid Female Presence

Both Vernal Pool Tadpole Shrimp Presence and Gravid Female Presence

Figure 6

500 feet
Approximate Scale

Stem Parcel Wetlands

Showing Pools In Which Vernal Pool Tadpole Shrimp Have Been Observed

Wetlands Research Associates, Inc.

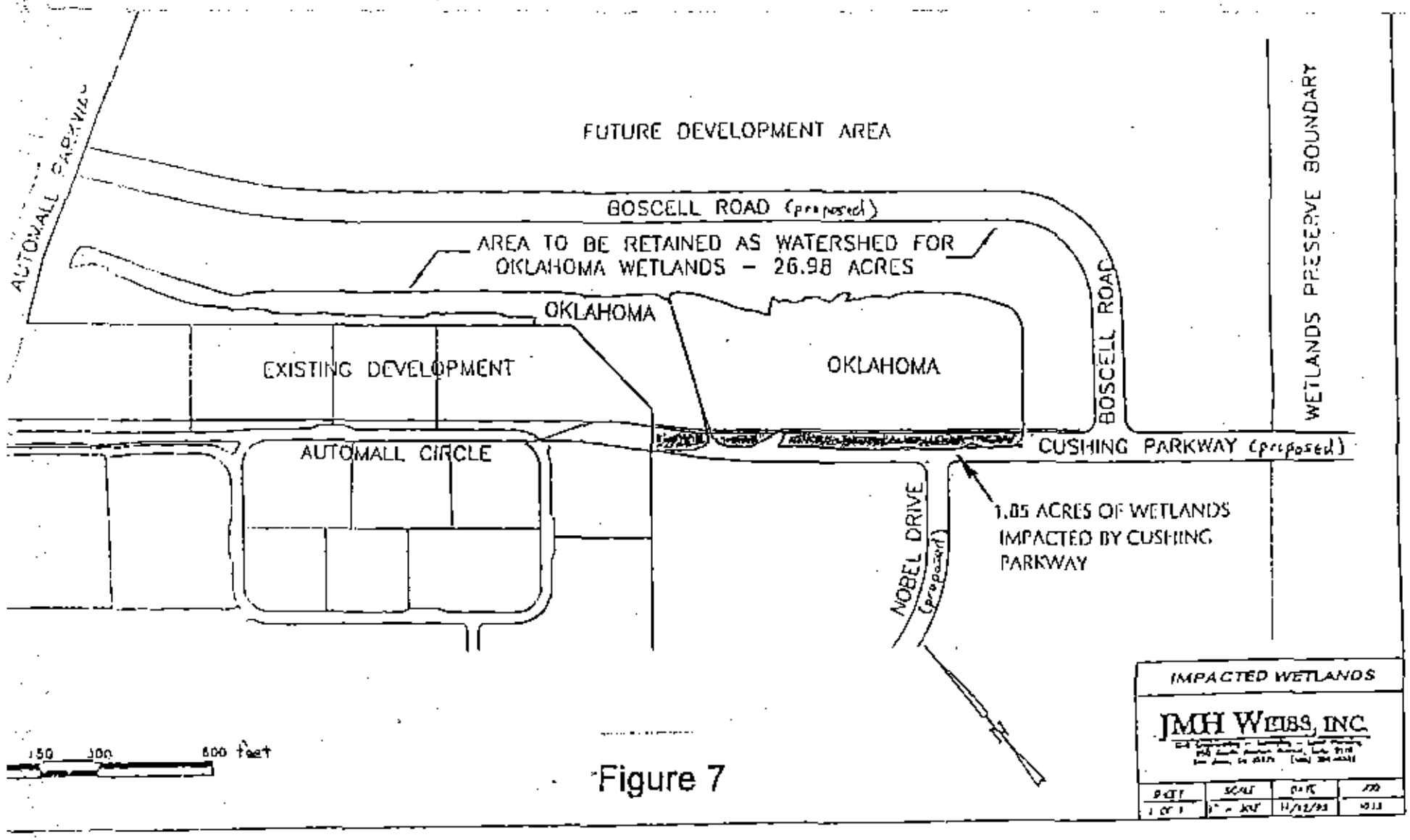
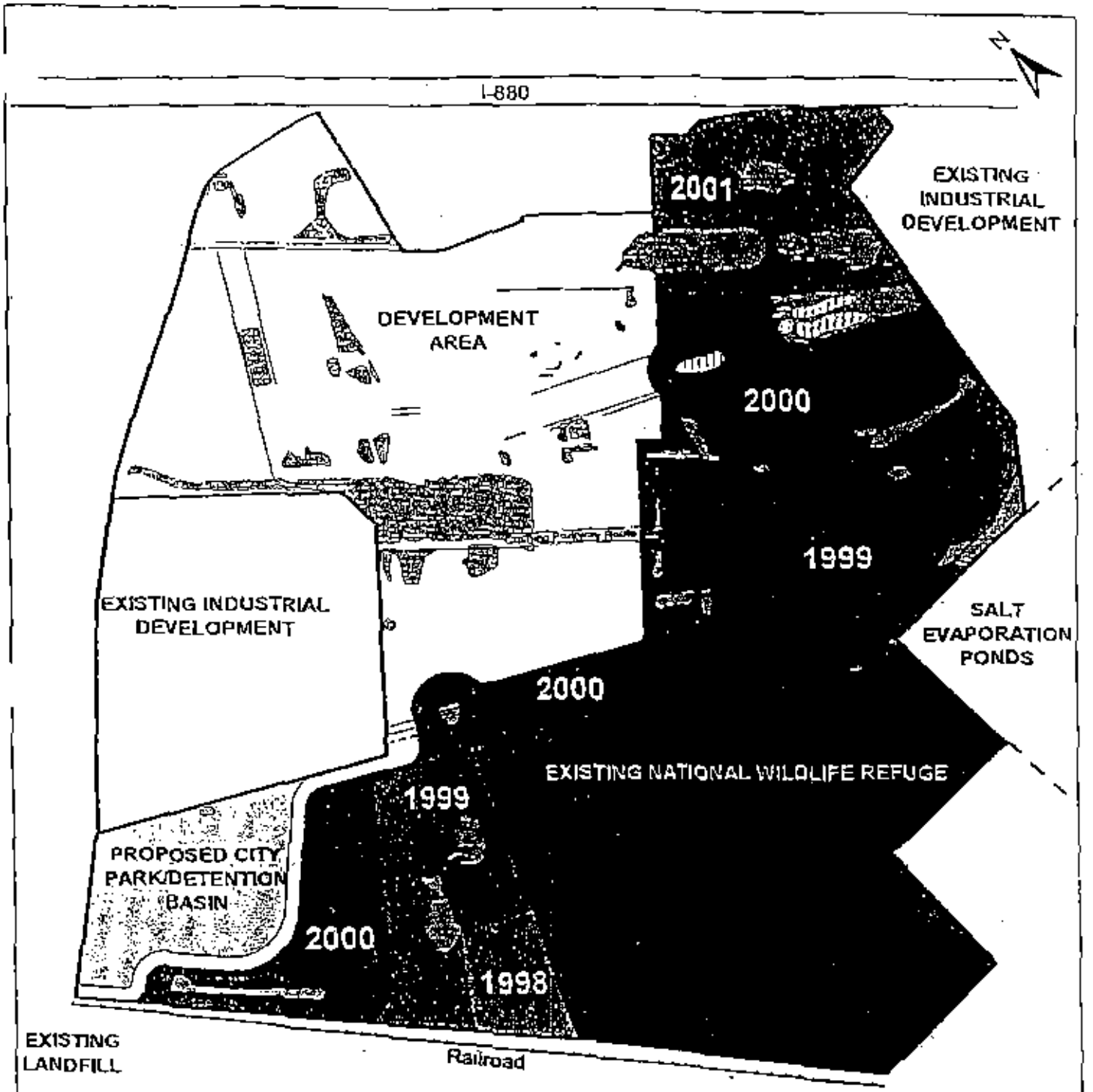

FUTURE DEVELOPMENT AREA
AUTOMALL PARKWAY
BOSCELL ROAD (proposed)
AREA TO BE RETAINED AS WATERSHED FOR OKLAHOMA WETLANDS - 26.98 ACRES
OKLAHOMA
EXISTING DEVELOPMENT
OKLAHOMA
BOSCELL ROAD
WETLANDS PRESERVE BOUNDARY
AUTOMALL CIRCLE
CUSHING PARKWAY (proposed)
NOBEL DRIVE (proposed)
1.85 ACRES OF WETLANDS IMPACTED BY CUSHING PARKWAY
150 300 600 feet
IMPACTED WETLANDS
JMH WEISS, INC.

Figure 7



LEGEND

- Seasonal Wetlands
- Goldfield Populations
- Proposed City Park/ Detention Basin
- Existing National Wildlife Refuge
- 1998 Phasing
- 1999 Phasing
- 2000 Phasing
- 2001 Phasing

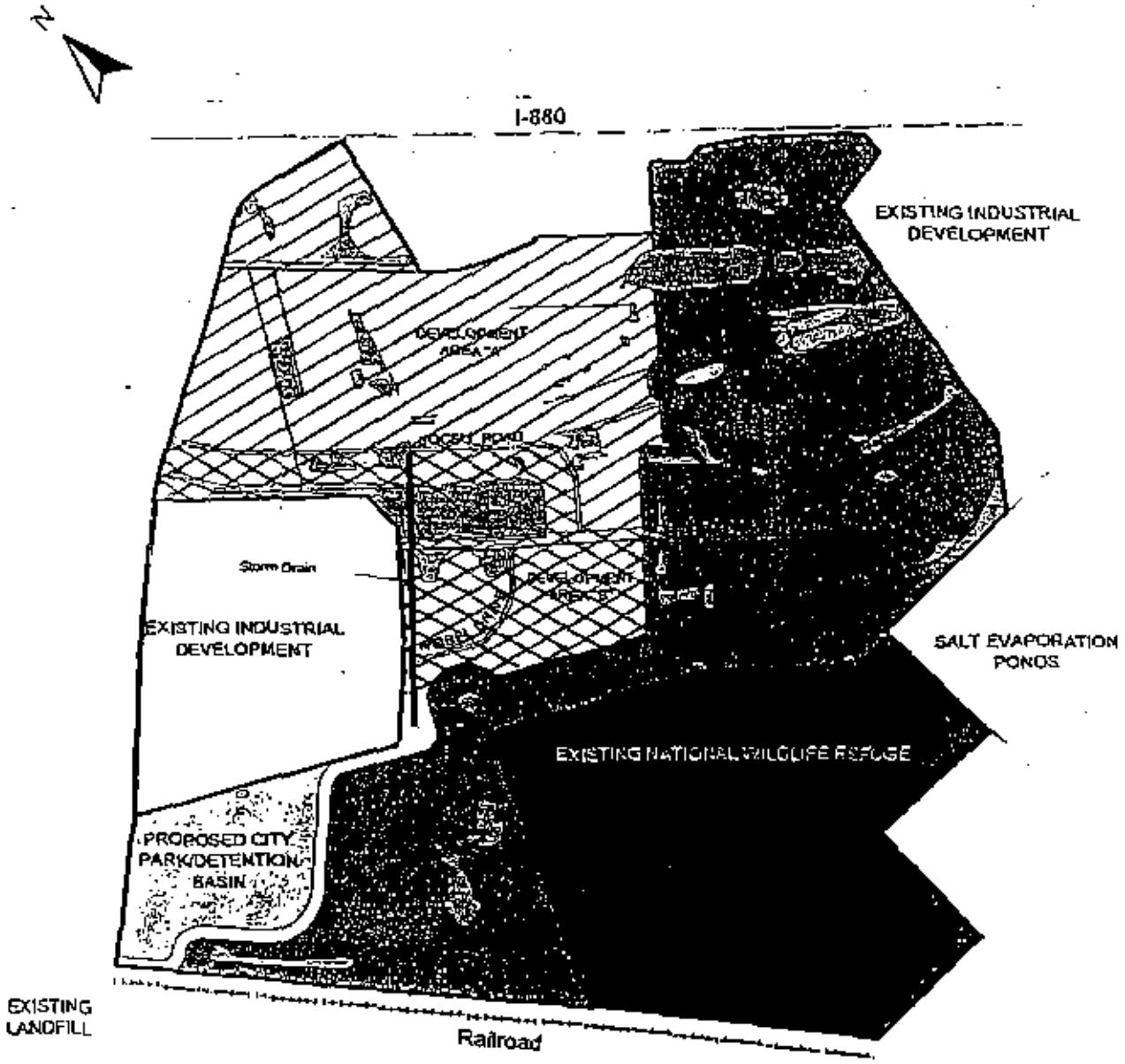
391-ACRE REFUGE ALTERNATIVE RESTORATION PHASING PLAN

Pacific Commons Project
Fremont, California

600 0 600 1200 FEET

Figure 8

DEVELOPMENT AREAS AND LOCATION OF STORM DRAIN UNDER OKLAHOMA POOL



LEGEND

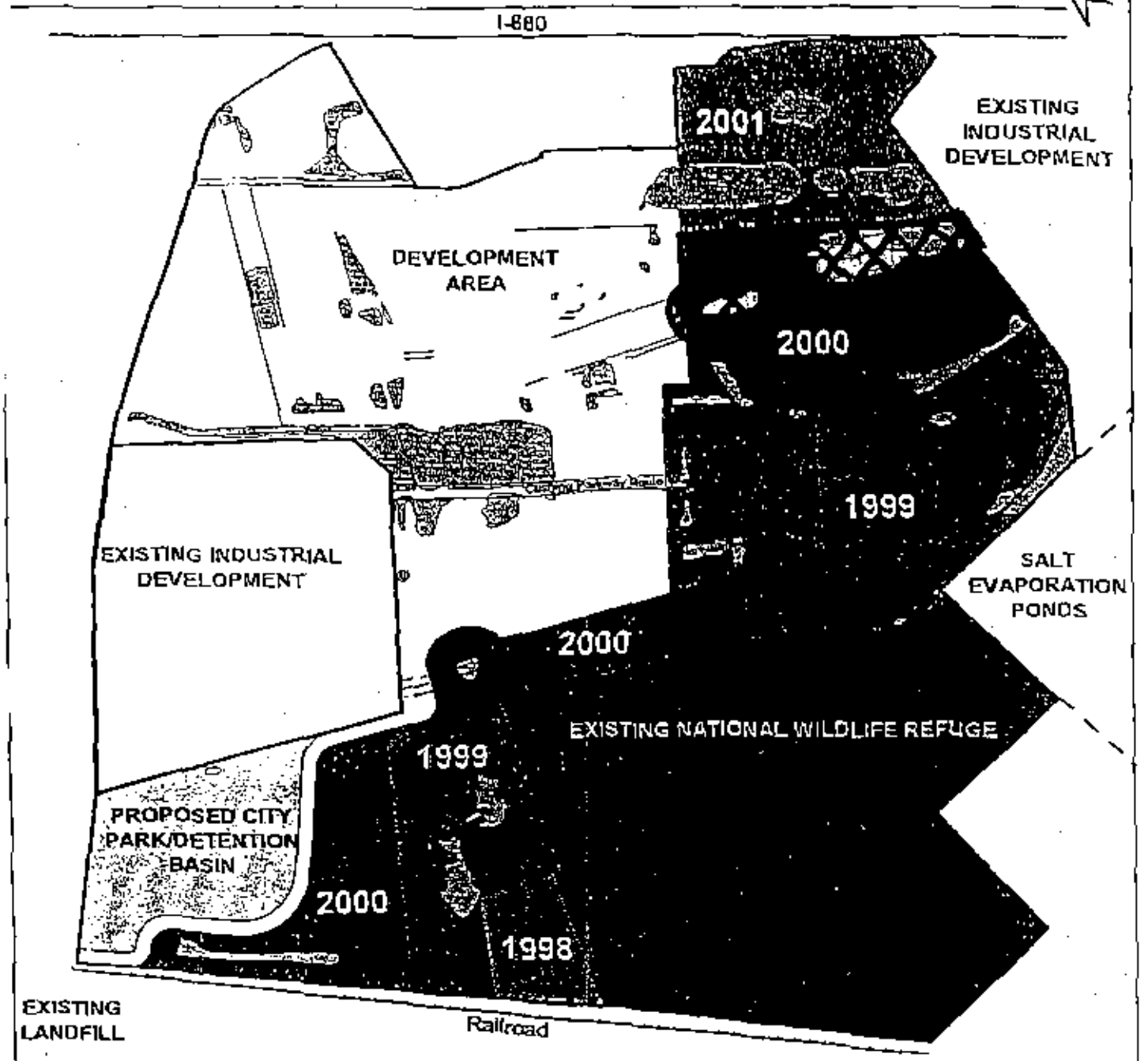
- SEASONAL WETLANDS
- GOLDFIELD POPULATIONS
- PROPOSED CITY PARK/ DETENTION BASIN
- PRESERVE AREAS
- EXISTING NATIONAL WILDLIFE REFUGE
- AREA REPRESENTING 10 ACRES

Pacific Commons Project Site
Fremont, California

750 0 750 1500 FEET

Figure 9

DELAYED MOWING AREA FOR CONTRA COSTA GOLDFIELDS



LEGEND

- Seasonal Wetlands
- Goldfield Populations
- Proposed City Park/ Detention Basin
- Existing National Wildlife Refuge
- 1998 Phasing
- 1999 Phasing
- 2000 Phasing
- 2001 Phasing

391-ACRE REFUGE ALTERNATIVE RESTORATION PHASING PLAN

Pacific Commons Project
Fremont, California

500 0 500 1000 FEET

Figure 10

Appendix C: Exhibits

Exhibit 1

EXHIBIT ___

IRREVOCABLE OFFER TO SELL

Offeror/Owner: Catellus Development Corporation
Offeree/Buyer: United States Fish and Wildlife Service

Pacific Commons Preserve Areas

SUMMARY OF MAJOR TERMS

1.	Effective Date:	_____, 1999
2.	Purchase Price:	$1.00.
3.	Commencement Date:	The date on which Owner first notifies Offeree in writing that (a) Owner has obtained all approvals, consents, declarations, permits, licenses, biological opinions, waste discharge requirements, certifications and other entitlements (collectively, the "Entitlements") required from the US Army Corps of Engineers, the US Fish and Wildlife Service, the California Department of Fish and Game, the San Francisco Bay Regional Water Quality Control Board, the County of Alameda, the City of Fremont, and other public agencies or entities that are required prior to commencing grading activities for the Pacific Commons business park located near the Property, and (b) Owner intends to rely on such Entitlements to commence grading.
4.	Closing Deadline:	90 days after Acceptance if Acceptance occurs during the Contract Term.
5.	Contract Term:	From the Commencement Date until the earliest of the following: the Closing Date; the Closing Deadline; the tenth (10th) anniversary of the Commencement Date if the Offer is not accepted prior thereto.
6.	Offeror/Owner:	CATELLUS DEVELOPMENT CORPORATION, a Delaware corporation

7. Offeree/Buyer: UNITED STATES FISH AND WILDLIFE SERVICE

8. Property: Two Preserve Areas:

Approximately 391 acres of wetlands and natural habitats located near Interstate 880 and Auto Mall Parkway in the City of Fremont, County of Alameda, State of California, as more particularly identified in Exhibit A-1, attached hereto.

Approximately 53 acres of nearby natural habitats known as the "Stevenson Parcel" at the end of Stevenson Blvd. in the City of Fremont, as more particularly identified in Exhibit A-2, attached hereto.

THIS IRREVOCABLE OFFER TO SELL ("Offer") is made and given as of _____, 1999 (the "Effective Date"), by CATELLUS DEVELOPMENT CORPORATION, a Delaware corporation, as owner/offeror ("Owner"), to and in favor of UNITED STATES FISH AND WILDLIFE SERVICE, as offeree/buyer ("Offeree"). All terms contained in the foregoing Summary of Major Terms are hereby incorporated by reference into this Offer.

1. Offer to Sell. Owner hereby offers to sell the land described in Paragraph 8 of the Summary of Major Terms above ("Land"), together with all rights and appurtenances pertaining to the Land (collectively, the "Property"), to Offeree, on all of the terms, covenants and conditions hereinafter set forth.

2. Purchase Price. If Offeree accepts the Offer and the Closing Date occurs, the purchase price for the Property shall be One Dollar ($1.00) ("Purchase Price").

3. Acceptance Period. Subject to the further terms and conditions set forth herein, the Offer shall be capable of being accepted by Offeree during the period beginning on the Commencement Date and automatically terminating at 4:00 p.m. on the last day of the Contract Term.

4. Commencement Date. Owner shall deliver the written notice of the Commencement Date to Offeree within sixty (60) days following Owner's receipt of all Entitlements, provided that the 60-day period shall be tolled on a day-to-day basis so long as there is a pending appeal or lawsuit challenging the Entitlements or the Pacific Commons project. If the Commencement Date has not occurred within two (2) years following the Effective Date, then this Offer shall terminate automatically.

5. Acceptance of Offer. Acceptance of this Offer ("Acceptance") shall only be by written notice of acceptance from Offeree to Owner at Owner's address as provided herein during the Contract Term. Upon Acceptance, this Offer shall become a contract for the purchase and sale of the Property upon all of the terms, covenants and conditions set forth herein (the "Contract").

6. Failure To Accept within Contract Term. Offeree's failure to deliver the written notice of Acceptance on or prior to the expiration of the Contract Term, or Offeree's failure to make all deliveries required of Offeree to permit Closing or to satisfy all other conditions of Closing that are within the control of Offeree on or prior to the Closing Deadline, shall terminate this Offer (and/or the Contract) and all rights and obligations of the parties hereunder. Except as specified in Section 4 above, this Offer may not be withdrawn, revoked or rescinded prior to expiration of the Contract Term, except with the written consent of Offeree.

7. Inspection of Property.

a. Right of Entry. Following the Commencement Date and throughout the Contract Term, Owner grants to Offeree the right to enter the Property during normal business hours to inspect the same for the purposes described below, upon reasonable advance notice to Owner, provided that Offeree does not disturb the use or enjoyment of the Property by Owner or its guests, licensees, permitees, contractors, affiliates, employees, agents and invitees. Offeree may, at Offeree's sole expense, conduct reasonable inspections and monitoring of soils, waters, flora and fauna on the Property. Offeree's first entry upon the Property following its receipt of an original counterpart of this Offer, signed by Owner, shall be deemed to constitute Offeree's agreement to the covenants of Offeree contained in Section 11.b.

b. Disclaimers. Offeree's Acceptance of the Offer shall be effective to disclaim any warranty, guaranty or representation of any kind by Owner, whether oral or written, past, present or future, of, as to, or concerning: (i) the nature and condition of the Property, including, but not by way of limitation, the water, soil, geology, environmental conditions (including the presence or absence of any hazardous or toxic materials, including petroleum products and by-products) and natural conditions, and the suitability thereof and of the Property as habitat for any flora or fauna or for any and all activities and uses which Offeree may elect to conduct thereon; (ii) the nature and extent of any right-of-way, lien, encumbrance, license, reservation or condition affecting the Property or title thereto; (iii) the compliance of the Property or its operation with any laws, ordinances or regulations of any government or other body; or (iv) any other matters whatsoever. The sale of the Property as provided for herein is made on an "AS IS" basis, and by its Acceptance, Offeree expressly acknowledges that OWNER MAKES NO WARRANTY OR REPRESENTATION OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, OR ARISING BY OPERATION OF LAW, INCLUDING, BUT IN NO WAY LIMITED TO, ANY WARRANTY

OF CONDITION, HABITABILITY, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PROPERTY.

8. Title and Deed. Following Acceptance and on or before the Closing Deadline, Owner shall convey the Land to Offeree (or to Offeree's designee) by deed ("Deed"). The date on which title to the Land is transferred to Offeree is hereinafter referred to as the "Closing Date." On the Closing Date, title to the Land shall be subject only to those exceptions to title referred to in Exhibit B, attached hereto (the "Permitted Exceptions").

9. Escrow.

a. Time. Upon delivery of Offeree's Acceptance, Offeree and Owner shall jointly establish an escrow ("Escrow") with a title company of national reputation willing to act in the capacity of title insurer and selected by Offeree at the time Offeree delivered its Acceptance (the "Title Company"). Escrow shall close when all documents and monies specified in this Section 9 have been deposited into Escrow. The failure of Owner or Offeree to be in a position to close Escrow on the Closing Deadline shall constitute a default hereunder by the party not in a position to close.

b. Documents and Monies. On or before the Closing Deadline, the parties shall deposit into Escrow the funds and the documents described below.

(1) Owner. Owner shall deposit the following: (A) the duly executed and acknowledged Deed conveying the Land to Offeree; (B) cash in the amount necessary to pay Owner's share of the closing costs and prorations as hereinafter set forth, as estimated by the Title Company; and (C) such other documents, including without limitation, escrow instructions, as may be reasonably required of Owner to close the transaction in accordance with the Contract.

(2) Offeree. Offeree shall deposit the following: (A) cash in the amount of the Purchase Price; (B) cash in the amount necessary to pay Offeree's share of the closing costs and prorations as hereinafter set forth, as estimated by the Title Company; and (C) such other documents and funds, including without limitation, escrow instructions, as may be reasonably required of Offeree to close the transaction in accordance with the Contract.

c. Procedure. Title Company shall close Escrow as follows:

(1) Record the Deed and deliver conformed copies thereof to Offeree and Owner;

(2) Deliver the Title Policy to Offeree; and

(3) Deliver the Purchase Price to Owner.

d. Escrow Instructions. Upon Acceptance, the Contract thus created from this Offer shall serve as escrow instructions and an executed copy of the Contract shall be deposited by Owner and Offeree with Title Company. The parties agree to execute for the benefit of Title Company such additional escrow instructions as required, provided that the additional escrow instructions do not change the terms of the Contract.

e. Closing Costs and Prorations.

(1) Offeree and Owner shall each pay its own attorneys' fees incurred in connection with this transaction. Offeree shall pay all title insurance costs, if any, all transfer taxes, if any, all Escrow fees, recording costs and all other costs of closing.

(2) Real property taxes and assessments, if any, shall be prorated as of the Closing Date.

10. Condemnation. In the event that proceedings are commenced in condemnation or under the right of eminent domain against all or any part of the Property prior to the Closing Date, this Offer (or the Contract then in effect if such proceedings are commenced following Acceptance but prior to the Closing Date), shall not be affected, and Offeree shall be free to accept the Offer and proceed to closing, without adjustment to the Purchase Price and subject to the legal effect of the pending proceedings. Notwithstanding the foregoing, any proceeds received by Owner or Offeree from any such condemnation or eminent domain proceeding that is commenced against the Property prior to the Closing Date shall belong to Owner in their entirety, and Offeree shall not be entitled to share in any award given by the condemning authority in respect of the Property (and Offeree will assign to Owner all rights to such proceeds if not yet received).

11. Special Covenants. Each of the parties hereby make the following covenants for the benefit of the other.

a. Owner's Covenant. During the Contract Term, Owner shall, at its sole cost and expense, maintain and restore the Property in accordance with the U.S. Fish and Wildlife Service Biological Opinion No. _____ (1999).

b. Offeree's Covenants. Offeree shall perform and abide by the following covenants, its agreement to which shall be signified by Acceptance of the Offer or by Offeree's first entry upon the Property following its receipt of an original counterpart of this Offer, signed by Owner.

i. Offeree agrees to support Owner in its efforts to obtain all Entitlements and shall not oppose Owner in Owner's efforts to process and obtain the same.

ii. During the Contract Term, Offeree shall do no act, and shall not permit any agent, employee, successor, assign or contractor, to do any act upon the Property, which would adversely affect the physical, natural or environmental condition of the Property, or create a substantial risk of injury or accident on or about the Property.

iii. Upon any termination or expiration of this Offer or the Contract without closing, Offeree shall immediately deliver to Owner a properly executed and acknowledged quitclaim deed quitclaiming all of Offeree's right, title and interest in and to the Property to Owner (or Owner's designee). The quitclaim deed shall be in recordable form and otherwise reasonably acceptable to Owner. Owner shall have the right to record the quitclaim deed.

iv. To the extent not prohibited by the Federal Tort Claims Act, 28 USC §§2671-2680, Offeree shall indemnify, protect, defend by counsel acceptable to Owner, and hold Owner harmless from and against any cost, expense, claim or liability arising from any entry by Offeree (or Offeree's employees, agents, contractors and invitees) onto the Property following the Effective Date.

12. Miscellaneous.

a. Successors and Assigns. The terms, covenants and conditions herein contained shall be binding upon and inure to the benefit of the successors and assigns of the parties hereto. Notwithstanding the foregoing, Offeree shall not assign Offeree's rights and obligations hereunder to any party without the prior written consent of Owner, which consent may be withheld or conditioned in Owner's sole and absolute discretion. Any such assignment in violation of this provision shall be void.

b. Entire Offer. This Offer contains all of the covenants, conditions and agreements between the parties and shall supersede all prior correspondence, agreements and understandings, both oral and written, relating to the subject matter of this Offer.

c. Attorneys' Fees. Should either party employ attorneys to enforce any of the provisions hereof or to protect its interest in any manner arising under this Offer, or to recover damages for breach of this Offer, the prevailing party shall be entitled to reasonable attorneys' fees and court costs. Offeree's acceptance of this provision shall be evidenced by Offeree's first entry upon the Property following its receipt of an original counterpart of this Offer, signed by Owner.

d. Governing Law. This Offer shall be governed by and construed in accordance with the laws of the State of California.

e. Notices. Any notice to be given or to be served upon any party hereto in connection with this Offer (including, without

limitation, the Acceptance) must be in writing, and may be given by certified or registered mail and shall be deemed to have been given and received when a certified or registered letter containing such notice, properly addressed, with first-class postage prepaid, is deposited in the United States mail; and, if given otherwise than by certified or registered mail, it shall be deemed to have been given when delivered to and received by the party to whom it is addressed. Such notice shall be given to Offeree at Offeree's address and to Owner at Owner's address, each set forth below. Either party hereto may, at any time, by giving three (3) business days' written notice to the other party, designate any address in substitution of the address set forth below.

To Owner: Catellus Development Corporation
201 Mission Street
San Francisco, California 94105
Attention: General Counsel

To Offeree: United States Fish and Wildlife Service
_____
_____
_____
_____

With a copy to: _____
_____
_____
_____
_____

f. Time. Time is of the essence of every provision herein contained.

g. Nonwaiver. Unless otherwise expressly provided herein, no waiver by Owner or Offeree of any provision hereof shall be deemed to have been made unless expressed in writing and signed by such party. No delay or omission in the exercise of any right or remedy accruing to Owner or Offeree upon any breach under this Offer shall impair such right or remedy or be construed as a waiver of any such breach theretofore or thereafter occurring. The waiver by Owner or Offeree of any breach of any term, covenant or condition herein stated shall not be deemed to be a waiver of any other term, covenant or condition. All rights or remedies afforded to Owner or Offeree hereunder or by law shall be cumulative and not alternative, and the exercise of one right or remedy shall not bar other rights or remedies allowed herein or by law.

IN WITNESS WHEREOF, Owner has made and given this Offer on the date set forth below, effective as of the date first above written.

Owner:

CATELLUS DEVELOPMENT CORPORATION, a Delaware corporation

By _____
Name: _____
Title: _____

Date: _____ __, 1999

EXHIBITS:

A-1	Legal Description of Wetlands Area
A-2	Legal Description of Stevenson Parcel
B	Permitted Exceptions

EXHIBIT A-1

LEGAL DESCRIPTION OF WETLANDS AREA

[To be attached]

EXHIBIT A-2

LEGAL DESCRIPTION OF STEVENSON PARCEL

[To be attached]

EXHIBIT B

Permitted Exceptions to Title

1. All exceptions to title shown in that Preliminary Report No. _____ issued by _____ Title Insurance Company as of _____, 199_, other than Items ___ & __ as shown on Schedule B thereto.

2. All other exceptions and matters of public record on the Effective Date.

3. All printed exceptions contained in Title Company's standard form CLTA title policy.

4. All tentative maps and all subdivision and parcel maps.

5. That certain Declaration of Restrictions, executed by Owner and recorded against the Property in the Official Records of Alameda County on _____ __, 1999, as Instrument No. _____.

6. That certain Conservation Easement granted by Owner in favor of _____, recorded against the Property in the Official Records of Alameda County on _____ __, ____, as Instrument No. _____.

7. The lien for real property taxes not yet due and payable.

8. The lien of other taxes and assessments of general application in the area in which the Land is situated which may be imposed on the Property after the Effective Date.

9. Other exceptions to title that may be approved by Offeree from time to time, which approval shall not be unreasonably withheld, conditioned or delayed.

S:\10\85\6388\MISC\jtb offer may 11 final OPT2C-001.WPD

edited 5/12/99 D. Wright

Exhibit 2

EXHIBIT E

DRAFT

AGREEMENT BETWEEN THE UNITED STATES FISH AND WILDLIFE SERVICE AND THE SAN FRANCISCO BAY WILDLIFE SOCIETY

This Agreement is made this _____ day of _____, 1999 by and between the United States Fish and Wildlife Service (the "Service") and The San Francisco Bay Wildlife Society (the "Society"), hereinafter referred to collectively as the "Parties."

I. RECITALS

This Agreement is based on the following facts, intentions and expectations:

A. The Service and the Society wish to cooperate in facilitating the development of regional programs to conserve habitat for threatened and endangered species in the San Francisco Bay Region.

B. The Service, a constituent agency within the U.S. Department of the Interior, is mandated under the Endangered Species Act of 1973, as amended, 15 U.S.C. 1531 et seq. (ESA) and other Federal conservation laws, to protect and conserve wildlife, fish and plant species. The Service has jurisdiction over the conservation, protection, enhancement and management of fish, wildlife, native plants and habitat necessary for biologically sustainable populations of these species.

C. The Service is authorized to enter into this Agreement by the ESA, the Fish and Wildlife Coordination Act, 16 U.S.C. 661666c, and the Fish and Wildlife Act of 1956, 16 U.S.C. 742(f) et seq.

D. The Society is a 501(c)3 non-profit public benefit corporation of the State of California.

E. The purpose of this Agreement is to facilitate the preservation of certain habitats and the species supported by those habitats, by providing a means for the City of Fremont and the Catellus Development Corporation ("Catellus") to comply with the ESA through payment of a fee to ensure monitoring and perpetual maintenance of two habitat preserve areas ("Preserve Areas") transferred to the Don Edwards San Francisco Bay National Wildlife Refuge complex ("Refuge") in connection with the Pacific Commons project, all as described in Biological Opinion 1-1-99-F-0004 dated _____, 1999, issued by the Service to the U.S. Army Corps of Engineers pursuant to Section 7 of the ESA ("Biological Opinion").

F. The Biological Opinion evaluated the impacts of the City of Fremont and Catellus' Pacific Commons project on the vernal pool tadpole shrimp (*Lepidurus packardi*) and the Contra Costa goldfields plant (*Lasthenia conjugens*). The project will result in the loss of 31 acres of vernal tadpole shrimp habitat within the 168 acre project site. The project was designed to avoid all known populations of the Contra Costa goldfields plant. 837

minimize

To mitigate the impact of the project on the vernal tadpole shrimp, in part, the City of Fremont and Catellus agreed to transfer the Preserve Areas, comprised of 391 acres at the Pacific Commons site and 53 acres at the nearby Stevenson parcel, to the Refuge and to establish a permanent Community Facilities District ("CFD"), pursuant to the Mello-Roos Community Facilities Act of 1982 (Cal. Gov. Code § 53311 et seq.), a portion of the special tax proceeds of which shall be paid, in accordance with the Biological Opinion, into an account for the purposes of monitoring and maintaining the Preserve Areas. This Agreement is intended to establish that account. ("Preserve Fund Account")

DRAFT

II. AGREEMENT

NOW, THEREFORE, in consideration of the recitals set forth above, the covenants herein and other consideration, the receipt and adequacy of which are hereby acknowledged, the Parties agree as follows:

A. Obligations of the Parties

1. The Service shall:

   (a) Be solely responsible for identifying the monitoring and maintenance activities to be funded with the ~~Mitigation~~ Preserve Fund Account and direct the Society to disburse funds from the account for such purposes.

2. The Society shall:

   (a) Deposit all fees received into a ~~Mitigation~~ Preserve Fund Account in a risk-free, interest-bearing account at a financial institution determined to be reasonably acceptable to the Society.

   (b) Upon deposit of funds into the ~~Mitigation~~ Preserve Fund Account, deduct a Management Fee, set at the rate of three percent (3%) of each deposit, to defray the costs associated with administration of the account.

   (c) Deduct from the account balance any accrued interest and any financial institution service charges or fees.

   (d) Provide to the Service, on or before December 31 of each calendar year, an annual accounting showing the deposits and disbursements of all sums received by it pursuant to this Agreement during the previous fiscal year, which begins on October 1 and ends on September 30.

   (e) Disburse any funds in the ~~Mitigation~~ Preserve Fund Account(s) solely at the written direction of the Service.

III. EFFECTIVE DATE

This Agreement shall take effect immediately upon execution by the Service and the Society.

IV. TERM OF AGREEMENT

Except as otherwise provided herein, this Agreement shall be in effect from the effective date hereof or from the date of first deposit to the ~~Mitigation~~ Preserve Fund Account, whichever is later.

V. AMENDMENTS

Amendments to this Agreement may be proposed by either Party and shall become effective upon the written agreement of both Parties.

VI. TERMINATION

This Agreement may be terminated by either Party without cause at any time upon thirty (30) days written notice to the other Party. Upon termination, the Society shall provide the Service with an accounting for the ~~Mitigation~~ Preserve Fund Account in accordance with the procedure set forth in Paragraph II.A.2(d) of this Agreement, and relinquish control of the Account as directed by the Service.

VII. MISCELLANEOUS PROVISIONS

A. Entire Agreement

This Agreement contains the entire agreement of the Parties with respect to the matters covered by this Agreement, and no other agreement, statement, or promise made by either Party, or by any employee, officer, or agent of either Party, which is not contained in this Agreement shall be binding or valid.

B. Interpretation and Headings

The language in all parts of this Agreement shall in all cases be simply construed according to its fair meaning and not strictly for or against either Party. Headings of the paragraphs of this Agreement are for the purpose of convenience only and the words contained in such headings shall in no way be held to explain, modify, amplify, or aid in the interpretation, construction, or meaning of the provisions of this Agreement.

C. Notices

All notices, demands, or requests from one Party to the other Party may be personally delivered, sent by facsimile, sent by recognized overnight delivery service, or sent by postage prepaid mail, certified or registered, to the addresses stated in this paragraph and shall be effective at the time of personal delivery, facsimile, transmission, or mailing.

before Aug 9, 1999
U.S. Fish and Wildlife Service
3310 El Camino Avenue, Suite 130
Sacramento, CA 95821-6340
Attn: David Wright
Telephone: (916) 979-2710
Telefacsimile: (916) 979-2723

after
2800 Cottage Way, Room W-___
95825

San Francisco Bay Wildlife Society
P.O. Box 524
Newark, CA 94536-0524
Telephone: (510) 792-0222
Telefacsimile: (510) 792-5828

Either Party may change the address to which such notices, demands, requests or other communications may be sent by giving the other Party written notice of such change. The Parties agree to accept facsimile transmitted signed documents and agree to rely on such documents as if they bore original signatures. Each Party agrees to provide to the other Party, within seventy-two (72) hours after transmission, such documents bearing the original signatures.

D. Successors and Assigns

This Agreement and the rights and obligations thereunder shall not be transferred or otherwise assigned by the Society without the prior written approval of the proposed transferee/assignee by the Service.

E. Execution

This Agreement may be executed in several counterparts and all counterparts so executed shall constitute one agreement which shall be binding on all of the parties, notwithstanding that all of the parties are not signatory to the original or the same counterpart. If any provision of this Agreement is held invalid, the other provisions shall not be affected thereby. Each party to this Agreement warrants to the other that it is duly organized, that it is validly existing, that if it is a corporation, it is qualified to do business in the State of California, and that it and the respective signatories have full right and authority to enter into and consummate this Agreement and all related documents.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first set forth above.

UNITED STATES FISH AND WILDLIFE SERVICE

By: _____

Name: _____

Title: _____

THE SAN FRANCISCO BAY WILDLIFE SOCIETY

By: _____

Name: _____

Title: _____

S:\10\85\4188\MISC\Agreement between USFWS and SFBWS-001.wpd

Exhibit 3

RECORDING REQUESTED BY:)
)
)
)
MAIL TO:)
)
)
)
)

Declaration of Restrictions

This Declaration of Restrictions is made as of _____, 1999 by [insert name of landowner].

WHEREAS, Declarant, [insert name of landowner] is the owner of a parcel of property located in the County of [insert name of County] (herein referred to as the PROPERTY), described in Exhibit A attached hereto and incorporated herein by reference; and

WHEREAS, Declarant is encumbering his/her land to assist in meeting requirements contained in the [insert name of biological opinion or habitat conservation plan] dated [provide date of final plan]. The [opinion, or plan, as applicable] and associated permits and/or take authorization(s) issued by the U.S. Fish and Wildlife Service and the California Department of Fish and Game pursuant to the Federal Endangered Species Act and the California Endangered Species Act, respectively, require that certain habitat types be preserved in perpetuity to compensate for impacts to Covered Species due to development and other activities carried-out by [Declarant, or other entity]; and

WHEREAS, Declarant is executing and recording this Declaration of Restrictions on their PROPERTY in order to implement the [biological opinion, habitat conservation plan] that requires protection of habitat in perpetuity; and

WHEREAS, the PROPERTY contains important habitat features necessary for [describe important values of the Preserve].

NOW, THEREFORE, Declarant declares as follows:

1. Covenant Running with the Land. In consideration of the benefits deriving from the [biological opinion, habitat conservation plan] and associated permit/authorization that authorizes incidental take of species in [insert name of County], the Declarant covenants and agrees to restrict, and by this instrument does restrict, the future use of the PROPERTY as set forth below by the establishment of this covenant running with the land.

2. Restrictions Concerning the PROPERTY. Neither Declarant nor any other person shall

engage in any of the following activities on the PROPERTY, *except* as required by the [biological opinion, habitat conservation plan, other] for restoration or maintenance of habitat values on the PROPERTY:

(a) [list clear prohibitions in this section; examples follow] Plowing or cultivation of the PROPERTY or any portion of the PROPERTY;

(b) Storing or placing of any materials or debris (whether temporarily or permanently) within the PROPERTY or any portion thereof;

(c) Discharging any dredged or fill material on the PROPERTY or any portion thereof;

(d) Discharging, dumping, disposing, storing, or placing any trash, refuse, rubbish, grass clippings, cuttings or other waste material within the PROPERTY or any portion thereof;

(e) Leveling, grading, landscaping or otherwise altering the topography of the PROPERTY or any portion thereof;

(f) Destroying or removing any natural trees, shrubs, or other vegetation that exists on the property or any portion thereof;

(g) Operating, riding, or using motorized vehicles on any portion of the PROPERTY;

(h) Erecting of any building, billboard, or sign on the PROPERTY;

(i) Any other activities incompatible with the continued viability of the PROPERTY as a natural area, including but not limited to unseasonal water application, incompatible use of pesticides, herbicides, rodenticides, or weed abatement activities, incompatible fire protection activities, and any and all uses which may adversely affect the purposes of these restrictions.

3. Condition To and Termination of this Declaration. This Declaration of Restrictions shall remain in full force and effect until and unless a conservation easement approved by the U.S. Fish and Wildlife Service is placed on the PROPERTY that ensures protection of habitat in perpetuity.

4. No Dedication; No Rights of Public Use. The provisions of this Declaration of Restrictions do not constitute an offer or dedication for public use, nor do the provisions provide for public access.

5. Successors and Assigns Bound. The Declarant hereby agrees and acknowledges that the PROPERTY shall be held, sold, conveyed, owned, and used subject to the applicable terms, conditions, and obligations imposed by this Declaration of Restrictions relating to the use, repair, maintenance and/or improvement of the PROPERTY, and matters incidental thereto. Such terms, conditions, and obligations are a burden and restrict the use of the PROPERTY, as applicable.

The provisions of this Declaration of Restrictions shall (subject to the limitation contained in this Declaration without modifying its provisions) be enforced as equitable servitudes and conditions, restrictions, and covenants running with the land, and shall be binding upon the Declarant and upon each and all of the Declarant's respective heirs, devises, and successors and assignees, officers, directors, employees, agents, representatives, executors, trustees, successors, trustees, and beneficiaries and administrators, and upon future owners of the PROPERTY and each of them in perpetuity and shall benefit the people of the State of California, and the people of the United States. The United States acting through any of its agencies, including but not limited to the U.S. Fish and Wildlife Service, shall have the right to enforce each of the terms of this Declaration of Restrictions.

6. Management and Funding. A Management Plan has been prepared for the PROPERTY (see Exhibit C, which is incorporated herein); such management is to occur in perpetuity. Obligations to manage the property shall be binding upon the Declarant and upon each and all of the Declarant's respective heirs, devises, and successors and assignees, officers, directors, employees, agents, representatives, executors, trustees, successors, trustees, and beneficiaries and administrators, and upon future owners of the PROPERTY. Funding adequate to carry-out management measures shall be borne by the Declarant and upon each and all of the Declarant's respective heirs, devises, and successors and assignees, officers, directors, employees, agents, representatives, executors, trustees, successors, trustees, and beneficiaries and administrators, and upon future owners of the PROPERTY.

Declarant

_____

NAME

By: _____

Name

_____

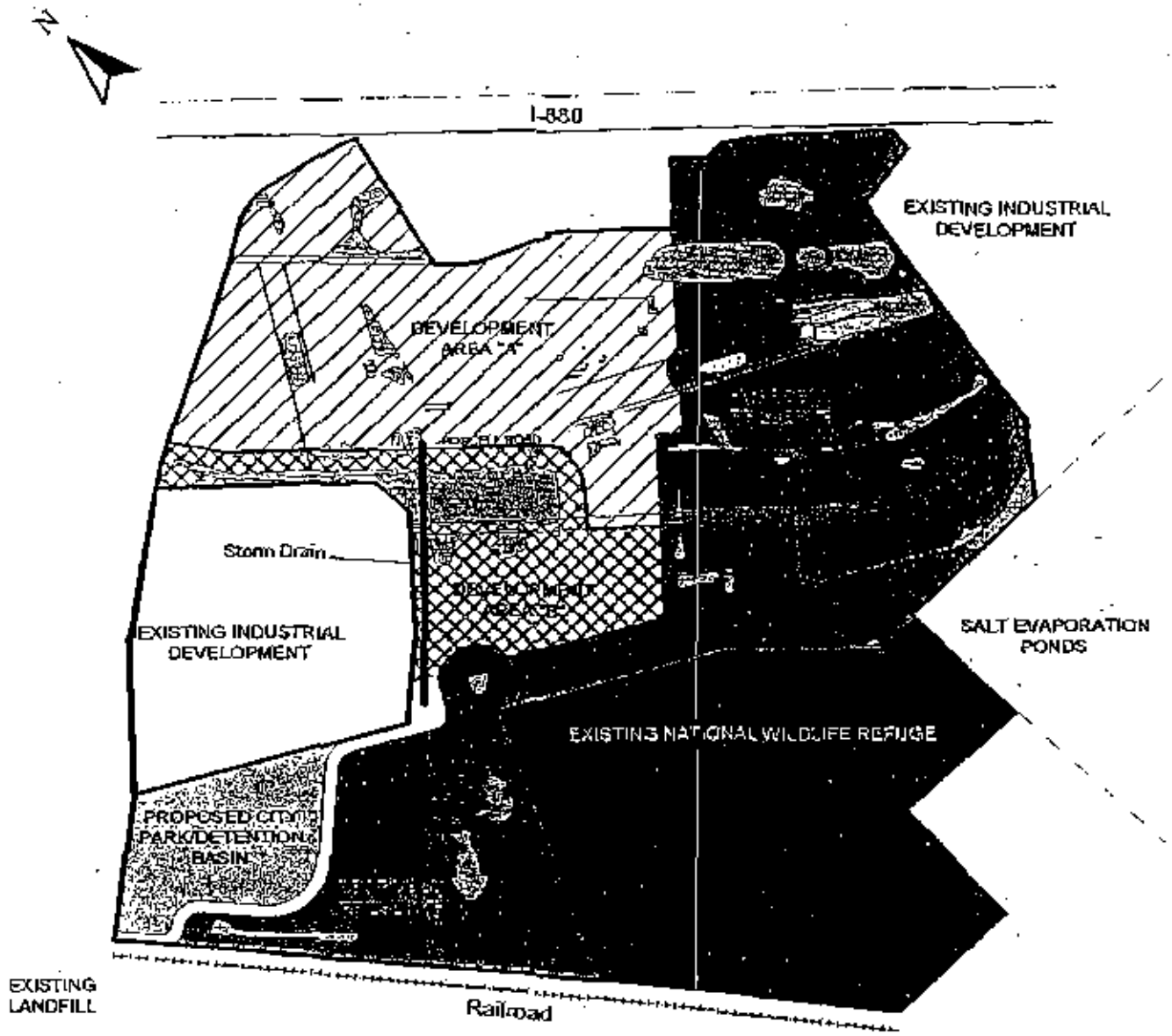
Title

Exhibit A
Map and Legal Description of PROPERTY

Exhibit B

Management Plan or Memorandum of the Management Plan (that outlines the Management Plan; better to record the entire Management Plan, if it is not too long)

391-ACRE REFUGE ALTERNATIVE



LEGEND

- SEASONAL WETLANDS
- GOLDFIELD POPULATIONS
- PROPOSED CITY PARK/ DETENTION BASIN
- PRESERVE AREAS
- EXISTING NATIONAL WILDLIFE REFUGE
- AREA REPRESENTING 10 ACRES

391-ACRE REFUGE ALTERNATIVE
Pacific Commons Project Site
Fremont, California

750 0 750 1500 FEET

Figure 1

Order 99-

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 99-061

WASTE DISCHARGE REQUIREMENTS FOR:

CATELLUS LAND DEVELOPMENT CORPORATION AND THE CITY OF FREMONT
PACIFIC COMMONS SITE
FREMONT, ALAMEDA COUNTY

1. The Catellus Land Development Corporation and the City of Fremont (hereinafter the Dischargers), propose to construct a 305-acre office park known as "Pacific Commons" and a four lane arterial road known as "Cushing Parkway Extension" (hereinafter the project), which will involve fill of 46 acres of delineated wetlands, 21.5 acres of which have been disclaimed from U.S. Army Corps of Engineers (hereinafter Corps) jurisdiction, on the 768-acre Pacific Commons site.

Site and Project Description

2. The project is located within the 768-acre Pacific Commons site, owned by Catellus, on property located west of Interstate 880 and south of the Automall Parkway in Fremont, Alameda County. The project, as currently proposed, will consist of a large commercial office park development, an extension of four lane Cushing Parkway, a new fire station, and a new city park/stormwater detention basin. The site is bounded to the south by office park developments, and to the west by the Warm Springs Seasonal Wetland Unit of the Don Edwards San Francisco Bay National Wildlife Refuge, the railroad tracks and the Tri-Cities Landfill, and on the north by a P.G.& E. transformer yard and an office park and commercial development. The 46 acres of wetland proposed for fill includes vernal pools, seasonal wetlands and wet meadows. Of the total 768-acre site, 391 acres are proposed to be devoted in perpetuity to a Preserve, containing preserved and re-created vernal pools, wet meadows, and seasonal wetlands as mitigation. The remaining area would provide the Cushing Parkway access and other roads (11 acres), a city sports park /stormwater detention basin (49 acres), and the remaining, realigned N-1 flood control channel (12 acres), in addition to the 305-acre office park . An additional 53 acres would be restored and preserved offsite as mitigation on the Stevenson Parcel, located just north of the Pacific Commons site. Also, an 840-acre habitat preservation easement would be dedicated, as mitigation for on-site impacts, to the long-term protection of the California tiger salamander on the Kammerer parcel east of San Jose, within 40 miles of the site. This 840 acre easement would be part of 1756-acre conservation easement over the entire Kammerer ranch parcel.

3. Site History: The Pacific Commons site has had a variety of past uses, including farming and ranching over most of the site. Farming on part of the site continued until as late as 1995. Most of the site has been leveled and farmed over the past decade. Other past uses

of the site include an outdoor theater arena, a sky sailing airport, a flea market, and an auto raceway complex. Approximately 20 acres of the north central portion of the site were excavated in 1990 to provide fill for the nearby "Auto Mall" complex along Highway 880. The resulting pond, known as "Oklahoma" because of its shape, eventually provided seasonally ponded wetland habitat for the endangered vernal pool tadpole shrimp. The past uses of the Pacific Commons site and the surrounding lands have resulted in a mixture of both surviving special status plant and animal species, and the habitat they require, and invasive species that threaten the well-being of these sensitive and endangered native species.

Due to the decades of land disturbance, the seasonally wet features at the site are predominantly manmade, and include drainage ditches from farm activities and rubble piles from past paving. While the Pacific Commons site may have had more natural vernal pool topography in the past, the agricultural and industrial activities of the past 100 years (leveling, berming, leveeing, draining, and irrigating) have altered the original soils and land contours on most of the site. The "Section 404 Permit Application "Alternatives Analysis" for the Pacific Commons Project in the Industrial Redevelopment Area of Fremont, California", dated September1998, (Alternatives Analysis), describes the current site as having "stagnated surface drainage" and being dominated by grassland vegetation, much of which is non-native. Portions of the site have hydric soils, flat terrain, and depressions shallow enough to allow for seasonal drying and thus to keep out perennial wetland plants or trees. Such areas can support vernal pool endemics such as the goldfield plant and other seasonal pool habitats.

Regulatory Authority and Findings

4. To protect the water quality at and in the vicinity of the Pacific Commons site for the duration of project construction, to adequately address proposed project impacts and mitigation to waters of the State, to meet the objectives of the California Wetland Conservation Policy, to require appropriate changes over the life of the project and its construction, and to address public concerns in an environmentally responsible way, the Board has determined to regulate discharge of dredged and fill material to surface waters at the site by issuance of Waste Discharge Requirements (WDRs).

5. The Dischargers have applied to the Board for Water Quality Certification under Section 401 of the Clean Water Act. On September 10, 1998, the U. S. Army Corps of Engineers (hereinafter Corps) re-issued a Public Notice for an Individual Section 404 permit. The first Public Notice issued for this project was in 1996. However the project was sufficiently changed and the City of Fremont became an additional applicant, so the Public Notice was reissued by the Corps.

6. State authority to regulate the discharge, and threatened discharge of waste to Waters of the State, including surface water, groundwater, and wetlands was granted to the State Water Resources Control Board in the Porter-Cologne Water Quality Act (Act). Water Quality Control Plans implement the Act by designating the beneficial uses to be

protected, and the water quality objectives reasonably required for that purpose.

7. The Board, on June 21, 1995, adopted, in accordance with Section 13244 et. seq. of the California Water Code, a revised Water Quality Control Plan, San Francisco Bay Basin (Basin Plan). This updated and consolidated revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in 23 CCR 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters. This order is in compliance with the Basin Plan.

8. This Order regulates the discharge of dredged and fill material to surface waters and does not apply to stormwater discharges associated with construction activities. The Dischargers are responsible for obtaining and complying with the rules and regulations of National Pollutant Discharge Elimination System (NPDES) permit requirements for such activities.

9. The project site is located within the South Bay Basin as identified in the Basin Plan. The following beneficial uses which are currently or have recently been in evidence on the site are identified in the Basin Plan: Warm Freshwater Habitat, Preservation of Rare and Endangered Species, Wildlife Habitat, Agricultural Supply, Groundwater Recharge, and Non-contact Water Recreation.

10. The Basin Plan Wetland Fill Policy establishes that there is to be no net loss of wetland acreage and no net loss of wetland value when the project and any proposed mitigation are evaluated together, and that mitigation for wetland fill projects is to be located in the same area of the Region, wherever possible, as the project. The Policy further establishes that wetland disturbances should be avoided whenever possible, and if not possible, should be minimized, and only after avoidance and minimization of impacts should mitigation for lost wetlands be considered. The Dischargers have submitted documentation to show that appropriate effort was made to avoid and then to minimize wetland disturbance, as required by the Basin Plan.

Additional Findings

11. The City of Fremont approved Catellus' plan for development at the Pacific Commons site and certified the Final Supplemental EIR for the project in 1996 . During the two years after EIR adoption, workshops were held with staff of the Corps of Engineers (Corps), the U.S. Fish and Wildlife Service (FWS), the U.S. Environmental Protection Agency (EPA), the California Department of Fish and Game (DFG), and the Board to determine how to further minimize onsite development impacts to wetlands and special status species. After extensive re-working of the original proposal, the Corps Public Notice, which had been originally issued in 1996, was reissued in September 1998. Many meetings and discussions of alternatives resulted in the project that includes the 391-acre Preserve configuration, and an elevated design for Cushing Boulevard, intended to

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minimize impacts from the roadway footprint and allow species movement under the elevated roadway. The Preserve is contiguous to the existing Seasonal Wetland Unit of the Don Edwards San Francisco Bay National Wildlife Refuge (hereinafter Refuge).

In addition to the 391-acre Preserve, the project allows for 305 acres of development activity. The 391-acre Preserve will be donated to the Refuge, along with funding for long term maintenance, once the regulatory agencies determine that the project has been successful in achieving the performance criteria spelled out in the project's Ecosystem Restoration Plan and in the FWS Biological Opinion for the site dated May 14, 1999, after the minimum of a ten year monitoring period. This preferred alternative is described as "Alternative 9" in the Alternatives Analysis. This Alternatives Analysis document also contains the "Ecosystem Restoration Plan" as Appendix D of the Alternatives Analysis.

12. Project Wetland Impacts: The total area of wetlands on the 768-acre site is 105 acres. Of those wetland acres, 59 acres will be avoided and 46 acres are proposed to be filled. Of the 46 acres proposed to be filled, 21.5 have been repeatedly jurisdictionally disclaimed by the Corps over the past decade and a half because of their location within a utility maintenance corridor which contains several large underground pipelines and high tension power lines.

Wetland Impacts, Avoidance, and Restoration Acreage Summary

Wetland Impacts, Development Envelope	Acres
Seasonally Ponded Wetlands (including vernal pools)	36.2
Wet Meadows	9.8
Total Wetland Fill Impacts (21.5 acres disclaimed by Corps)	46.0
Wetland Avoided (Outside Development Envelope)	
Seasonally Ponded Wetlands	38.3
Wet Meadows	21.3
Total Wetland Avoided	59.6
Wetland Mitigation (on 391 acre parcel - 4 acres wet meadow impacted by mitigation creation)	69.0
On Stevenson parcel	8
Total Wetland Mitigation Created	77
Area within Preserve on main project site	
Total post-restoration wetland area on Preserve	128.6
Upland habitat and buffer	262.4
Total Preserve Area on main project site	391

If pre-construction physical site investigations and/or the results of the first phase of

restoration reveals that it will not be possible to restore and construct 69.0 acres of wetlands in the Preserve, or if after a majority of the ten-year monitoring period some portion of the created wetland is unsuccessful and cannot be repaired, the shortfall will be made up by restoration and construction on an off-site parcel selected from the Refuge's list of "Ownerships and Acreages of Lands Within the Proposed Refuge Expansion Area" (see Provision B. 22).

In addition to the above impacted and restored wetland acreage, off-site mitigation at the 53-acre Stevenson Parcel, which is already owned by Catellus, will add 8 more created wetland mitigation acres, and 7 more preserved wetland acres.

The Corps has disclaimed jurisdiction over approximately 35 (including 21.5 acres of the 46 to be filled) acres of delineated wetlands in the central portion of the Pacific Commons site, because it determined in 1979 that a large portion of the site would not "involve the discharge of dredged or fill material into a water of the United States". However, the Dischargers generally did not distinguish between jurisdictional and non-jurisdictional wetlands in the alternatives analysis conducted for the project.

In addition to the impacts and mitigation described above, the Dischargers will provide additional compensatory mitigation in two forms:

a) Refuge Capital Improvements With Maintenance Endowment

The Dischargers will provide funding for capital improvements, with a maintenance endowment, for the Refuge's existing 255-acre Seasonal Wetlands Unit. The Dischargers shall submit a plan and schedule for providing such funding, acceptable to the Executive Officer, by September 3, 1999. This is the Reference site for the mitigation to be constructed, and is important endangered species habitat.

b) Additional Mitigation Property

The Dischargers will acquire additional wetlands habitat acreage, or land on which additional mitigation can be constructed, from the Refuge's list of desirable acquisitions (Attachment C.). This acquisition and the conveyance to the Refuge of this acquisition shall include appropriate capital improvements, such as fencing.

Special Status Species

13. Contra Costa Goldfields (CCG) is a native vernal pool plant species and is listed as federally endangered. Surveys located approximately 3,100 plants in 5 small subpopulations on about 4 acres in the southeastern portion of site. Many more plants were found on the adjoining Refuge. The plant is in danger of being taken over by non-native grasses, especially ryegrass. This species and other grasses are becoming established in the wetlands occupied by Contra Costa Goldfields both on the site and in

the adjacent Refuge. The Alternatives Analysis notes that the spread of the non-native grasses is due in part to a lack of grazing which previously kept these invasive grasses in check. On both the Refuge and the proposed Preserve, the increasing grass cover and associated thatch are threatening to reduce the size of the Contra Costa Goldfield populations. Grazing and other management techniques such as mowing, controlled burning and selective use of herbicides will be used during the 10-year monitoring period and during long term management to allow the Contra Costa Goldfields to establish.

14. Vernal Pool Tadpole Shrimp (VPTS) is a federally protected species that would be impacted by the project. The VPTS has been found on site and in the adjacent Refuge. This tiny shrimp requires freshwater seasonal pools that pond for at least 7 weeks in order to allow eggs to hatch and reach reproductive maturity. Larger and deeper pools with exposed mud bottoms provide even better habitat for this species. Heavily vegetated, thatched, or saline ponds provide poor or no habitat for the VPTS. 62 acres of the site were determined to provide VPTS habitat, and 31 of these acres are planned to remain in the Preserve. VPTS have reproduced successfully in the newly created vernal pools in the site's pilot mitigation area. The FWS requires three breeding seasons be successful in the mitigation area before Development Area "B" can be filled (figure 2, Attachment A). The performance criteria for the VPTS are contained in Provisions B. 17., 18., and 20.

15. California tiger salamander (CTS) is a candidate for listing under the federal Endangered Species Act. 1997 surveys found CTS larvae and adults on the Pacific Commons site. A mitigation agreement between the Dischargers and DFG requires the Dischargers to acquire a habitat preservation easement for a minimum of 400 acres off-site at existing CTS aestivation habitat as mitigation for development of the same amount of acreage in the central portion of the Pacific Commons site. The Dischargers current project involves the purchase of a habitat preservation easement for 840 acres of the Kammerer parcel in east San Jose. The entire Kammerer Ranch parcel of 1756 acres will be protected under a conservation easement, to be held by the Nature Conservancy. The performance criteria for CTS on-site are described in Provision B. 17.

16. Burrowing Owl (BO) is not a special status species, but is protected under the California Fish and Game Code. Surveys found occupied and active burrows used by the BO, so artificial nesting burrows were constructed last winter. More surveys will be conducted and monitoring of artificial burrows will be part of the final monitoring plan. Grass heights will be controlled in sensitive areas to allow the BO to detect predators. There is no performance criteria for BO, however monitoring will be carried out.

Avoidance, Minimization and Mitigation

17. The Pacific Commons site poses a dilemma for conventional avoidance. Excepting the requirements of the Endangered Species Act, if the Dischargers provided plans based only on avoidance, many small wetland features would be surrounded by non-jurisdictional land, leading to a maximum disturbed boundary, and degrading the functions of these "avoided" wetlands, even with buffers present. The desire to maximize functions such as

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habitat value and protection of the special status species, and to reduce the urban boundary or disturbed edge to the minimum have led to the current project and the preservation of 391 southern acres of the site.

A total of 28 alternatives (12 onsite and 16 offsite) were considered in the Alternatives Analysis. The 12 onsite alternatives were analyzed for:

(1) Significant Net Onsite Increase in Wetlands
(2) Avoidance of Contra Costa Goldfields
(3) Significant Net Onsite Increase in Vernal Pool Tadpole Shrimp Habitat
(4) Biological Connectivity of All Preserve Areas(s) to Refuge
(5) Avoidance of Jeopardy to Endangered Species
(6) Meet Five-Minute Emergency Response Standard
(7) Alternative Evacuation Route for I-880 Emergency
(8) Meet Regional Arterial Needs
(9) Jobs-Housing Balance
(10)Infrastructure Financing Commitments
(11) Annual Funding for City Services
(12) Recreational Park (Siting and Funding)
(13) Educational & Social Welfare (Siting and Funding)
(14) Overall Project Feasibility

In addition to the 28 alternatives considered in the Alternatives Analysis, 6 alternative alignments for the Cushing Parkway extension were also covered in the workshops and meetings. The elevating of the Cushing Parkway to avoid impacts to sensitive species is estimated to add an additional $8 million in construction costs.

<u>The Preferred Alternative (Alternative 9 of the Alternatives Analysis, September 1998):</u>

18. The project is the preferred alternative and provides for the following:

- 391 acres of the 768-acre Pacific Commons site will be restored and preserved in perpetuity as a permanent seasonal wetlands habitat Preserve located contiguous to the existing Refuge.
- 53 acres of the nearby "Stevenson" parcel will also be preserved and restored for seasonal wetlands and protected species, including the VPTS and CTS.
- The City of Fremont's recreation sports park will be co-located with stormwater management facilities (detention/retention basins) on 49 acres of the site.
- The N-1 stormwater channel will be removed from the Preserve and realigned along the northern edge of the Preserve to drain the proposed development area.
- 305 acres will be developed as an office park in multi-storied structures.
- VPTS Habitat: 69 acres of vernal pools will be created and 59 acres of existing seasonal wetland will be preserved and maintained on the 391-acrePreserve.
- New VPTS habitat has already been constructed. The "Oklahoma" pond will not be filled until 3 years of monitoring have confirmed the successful establishment of VPTS

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habitat.

- The Cushing Parkway extension will be elevated.
- The "Urban edge" will be minimized through the large single Preserve parcel that is contiguous with Refuge.
- All CCG areas, which are all within the 391-acre Preserve, will be avoided and buffered.

19. Mitigation and Preserve

The goal of the project's mitigation will be to establish an onsite wetland-upland mosaic comprising vernal pools, connecting swales, and other seasonal wetland habitats, in addition to level and mounded upland topography. The mitigation project will seek to achieve this balanced ecosystem by restoring hydrologic connectivity, creating a self-sustaining/resilient ecological unit, preserving and restoring VPTS and CTS habitat, avoiding and maintaining CCG habitat, providing for BO habitat in upland areas of the preserve, maintaining buffers, maintaining surface water flows, and preserving wildlife migration corridors beneath Cushing Parkway.

The new seasonal wetland/vernal pool complex will reflect the type of topography found in the adjoining Refuge, but the Preserve as a whole will contain more uplands than wetlands, in excess of the average 55:45 uplands/wetlands ratio that is found in the Refuge. The resultant ratio is based on the professional judgment of FWS personnel whose experience with other vernal pool habitat made them skeptical the Preserve could support a 45% wetland density as originally proposed. Overall wetland density on the Preserve will thus be 32%, and inundated pool density for VPTS habitat will be 10-15%. This is based on historic photos, soil samples, and site characteristics of undisturbed portions of the Refuge.

20. The Reference Site

A template for the Preserve will be provided by observation and analysis of data obtained from the Reference Site, the Warm Springs Seasonal Wetland Unit (SWU) of the Refuge, a 255 acre area acquired by the FWS. The Refuge shares a common eastern and northern boundary with the Pacific Commons site. The Reference Site will comprise one or more mosaics of wetlands and uplands selected to represent the range in physical and hydrologic conditions within relatively undisturbed portions of the SWU, containing vernal pools, connecting swales, and seasonal wetlands. The reference mosaic is part of a mound-and-depression micro topography on Pescadero (drained) and Willows clay soils, both of which occur on the Pacific Commons site. Hydrologic and topographic data have already been collected and soils data will be collected. These data will provide important information for developing the ecological restoration plan including information on slopes between the uplands and wetlands, widths and shapes of swale bottoms, shapes of vernal pools, swale gradients, outlet elevations of vernal pools "imbedded" in the swales, and the general pattern of original wetland and upland habitats.

The Preserve is expected to be ecologically valuable and successful because:
1. it will have the same density and pattern, soils, topography, and physical properties of

the original native wetlands;
2. inundation periods and soil saturation will approximate characteristics of native wetlands;
3. it will provide habitat for core regional flora;
4. the wetlands will be subject to a long-term management plan; and
5. the site is suitable for re-establishment of CCGs, VPTS, and, depending upon periods of inundation of the deeper wetlands and vernal pools, the CTS.

21. Long Term Management of Invasive Species
Non-native grasses are likely to spread and cover the bottoms of existing and restored high quality VPTS pools unless management, such as grazing and mowing, and, in extreme cases, use of controlled burning and/or herbicides, is actively employed. The five most threatening species listed in the Alternatives Analysis are: Bermuda grass, dallis grass (*Paspalum dilitatum*), Phyla (*Phyla nodiflora*), Harding Grass, and broadleaf peppergrass (*Lepidium latifolium*). A sixth species, ryegrass (*Lolium multiflorum*) bears watching for its ability to endanger the CCG populations.

Recognizing the need to control these and other invasive species, the applicants have provided a long-term strategy for managing the Preserve which includes grazing by either cattle or sheep, with horses as yet a third alternative, mowing, controlled burning, and limited herbicide use (Wetland Research Associates, Inc. and SAGE Associates, 1999). The Dischargers will also be employing a mechanical implement to remove accumulated thatch in some portions of the Preserve.

Phasing, Performance Criteria and Monitoring

22. Phasing. The first phase of the project has occurred before any of the major permitting actions, as the Dischargers have already constructed approximately 7 acres of vernal pools on 19 acres of the Preserve. This pilot was created to provide additional VPTS habitat and to gain vernal pool design information to be used in the other phases of the restoration. The goals of constructing the project and the mitigation in phases are:

a. To ensure that a healthy and reproducing stock of special status species are maintained in the mitigation areas and preserve, prior to destruction of habitat within the development area.

b. To gain more accurate design information and therefore design and construct the later phases of the mitigation adaptively, building on information gathered from earlier phases.

c. To buffer the disruptive effects of mitigation construction on the special status species by avoiding disturbing a large portion of the existing habitat at one time.

23. Four Phases of Restoration Construction. The mitigation construction will occur in four phases, the first of which, Phase 1, has already been built. The complex mosaic of vernal pool wetlands constructed can be seen in the restoration plan (Figure 1, Attachment A).

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Phase 1 includes successful translocation of VPTS in the constructed vernal pools on the Stem Parcel. One season of success during 1998 and 1999 has been documented for these VPTS, and two more successful seasons are required by the FWS Biological Opinion in order to proceed with development of Development Area "B" (Figure 2, Attachment A). Approximately 7 acres of vernal pools were constructed during Phase 1. In addition to the four phases of restoration construction, management of invasive "pest" plants on the Preserve will begin currently, and will be a management effort on the site in perpetuity.

Phase 2 restoration construction is scheduled for late 1999 (Figure 3, Attachment A). Development Area "A", (Figure 2, Attachment A) will be developed and the Cushing Parkway will be constructed, including fill of approximately 1.8 acres of the Oklahoma pond. Also included in this phase is underground storm water drainage pipe installation and, possibly, the construction of Nobel Drive.

Phase 3 restoration construction is scheduled for 2000 (Figure 3, Attachment A), and will involve restoration near the CCG areas in the southeast portion of the site, as well as along the utility corridor on the Refuge boundary.

Phase 4 , the final phase of wetland construction, is scheduled as early as winter/spring of 2001 if VPTS reproduction success in the Phase 1 ponds continues to be successful. Development of Area "B", the remainder of the development area, would then proceed, along with the final phase of wetland construction.

Both the Development Areas and the restored Preserve will take several years to complete. Most of the initial work to construct the restoration will occur in the first three years, but adjustments will probably be necessary, based on data collected and analyzed from the reference site at the Refuge, and direct monitoring of the constructed vernal pools.

Performance Criteria

24. Three types of habitat will be assessed to determine if the mitigation performs adequately: vernal pools, VPTS habitat, and seasonal wetlands. The distinction between vernal pools and VPTS habitat is based on the relatively long period of inundation required by the VPTS for survival (no less than 60 days) and vegetation (VPTS needs less than 30% cover). Most of the hydrology performance criteria listed below are required during the last eight of the ten-year monitoring period. While there are not large sets of projects with which to compare the performance criteria for this project, the performance criteria provided by the Dischargers appear likely to protect wetland functions, as long as adequate provisions are made to assure that non-native plants are controlled before they take over the site and prevent the spread of native species.

25. Hydrology Criteria

(a) Vernal Pools: the number of days required to attain a functional water level, the

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number of days this inundation is maintained, and the number of days to drainage must all fall within the range of means for the reference vernal pools over the same period.

(b) VPTS habitat: must have standing water > 0.2 feet for at least 60 consecutive days for years when total rainfall is at least 75% of normal.

(c) CTS breeding habitat: will contain standing water continuously between January 1 and June 1 in years of average or above-average rainfall.

(d) Seasonal Wetlands: the mean number of consecutive days over which the upper 0.5 feet of soil at the swale is saturated or inundated exceeds 30 days.

26. Vegetation Criteria

(a) Vernal Pools:

1. vegetation will be dominated by hydrophytic vegetation.

2. the number of vernal pool species will be at least 80% of the average number of vernal pool species in the source or reference pools.

3. the total canopy cover of vernal pool species will be at least 50% of the average cover of vernal pools species in the reference pools.

4. the total cover will show no significant declines during the monitoring period.

(b) Seasonal Wetlands vegetation: Same criteria as Vernal Pool vegetation

(c) VPTS habitat: suitable vegetation is unknown, but percent cover should be < 30%. Also, thick organic matter should not cover more than an additional 30%.

(d) CTS: no vegetation criteria used

27. Special Status Species Criteria

(a) VPTS:

1. standing water at >0.2 ft for at least 60 consecutive days during years when total rainfall is at least 75% of normal
2. vegetation is hydrophytic and total cover < 30%
3. organic matter covers < 30% of bottom
4. VPTS are present

(b) For Phase I: Three years of monitoring must reveal gravid females present in wetlands designated as VPTS habitat based on counts of adults when wetlands contain water, unless dry-season sampling is necessary. This criteria must be met before Development

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Area "B" can be filled, (see Figure 2, Attachment A). At least 50% of all pools created specifically as VPTS habitat in Phase 1 (at least 9 pools) will have gravid female VPTS for 3 years in the same pools. In year when no gravid female VPTS are found in the "Oklahoma" pond, at least 25% of the Phase one VPTS ponds must have gravid female VPTS. The presence of eggs during dry sampling years will not be adequate proof of success, unless there is a means of distinguishing between eggs that were translocated and eggs that were laid *in situ*. Sampling should follow protocols recommended by the FWS.

(c) CTS breeding ponds: must contain standing water continuously between January 1 and June 1 in years of average or above-average rainfall.

28. Monitoring

Monitoring of the above performance criteria and for general trends relevant to the target species and habitats will continue for 10 years. All constructed and restored wetlands in Phase 1 will be monitored, but the exact number of wetlands to be sampled in Phase 2 has not yet been determined, and is awaiting analysis of Phase 1 data.

If monitoring shows any wetlands to be in irreparable failure, replacement wetlands will be restored or constructed the following year, and the monitoring program will begin again. If the wetlands may fail but remedial action can bring them into conformance with the performance criteria, appropriate remediation will be undertaken.

If more than 30% of any individual failing mitigation wetlands must be repaired, then monitoring for those wetlands will be extended for 2 years. If less than 30% of any individual failing mitigation wetlands must be repaired, then the monitoring schedule can continue through year 10. If more than 30% of the wetlands in the entire mitigation site requires significant repair of any type, then the entire site will be monitored for an additional 2 years.

Annual reports will be provided and will include methods used, locations sampled, results of monitoring, trends, reference weather conditions, comparison of the Preserve with the Reference Site, condition of sensitive species, wildlife use, recommendations, aquatic invertebrate community development, management actions taken, and responsible parties.

29. Stormwater Quality Measures:

The applicants will incorporate permanent stormwater quality control measures such as vegetated swales in the commercial development. In addition, approximately 20 acres of the northwest corner of the development will be used as a stormwater detention basin for water quality improvement All of the stormwater from the 305-acre commercial development will be directed away from the Preserve and mitigation. Stormwater discharges to surface waters associated with construction activities and post project construction will occur, and will be regulated under the appropriate NPDES permit.

30. Contingency Measures:

The Dischargers have proposed a conceptual mitigation plan and design principles as a

part of the project, contained in the "Ecosystem Restoration Plan", Appendix D. of the Alternatives Analysis, to offset the loss of beneficial uses of waters of the State. The mitigation pilot (Phase 1) is proving that the creation of vernal pools has a high likelihood of success. The total acreage of mitigation wetlands the Dischargers have committed to create is 77 acres. Final mitigation design plans will be submitted for review by the Executive Officer according to the schedule outlined in Provision B. 12. If the created wetlands do not achieve performance criteria after a reasonable portion of the monitoring period, even after repairs have been attempted, the Dischargers will obtain property from the Refuge property acquisition list, and compensatory wetland creation will occur there. Provision B. 22. requires this compensation to occur at a ratio of 2 acres replaced to that unsuccessfully constructed, to further compensate for temporal losses. This is not anticipated to be necessary, and the need would not be identified until at least five years after restoration construction.

31. Long Term Maintenance and Management:
A long-term management plan has been submitted, and is under review by the regulating agencies. The FWS will implement the plan, once the mitigation is successful and meets final performance criteria. At that time, the Preserve will be transferred to the Refuge. The plan focuses on the costs and logistics of mowing and grazing, by sheep or cattle, to control weeds and exotic grasses, particularly in the vernal pools. The Dischargers have committed to endowing the long-term maintenance of the Preserve in perpetuity, as they will do for the offsite CTS preserve.

32. Financial Assurance. The Dischargers will provide a surety bond in the amount of all of the costs associated with constructing , monitoring, and, if necessary, repairing the mitigation during the ten or more year period prior to the Preserve wetland meeting performance criteria. The Dischargers currently estimate this amount to be $10 million dollars. Portions of the funding security will be canceled as portions of the work are completed. The Dischargers are responsible for all funding of the construction, the ten year monitoring program and all management activities, prior to the attainment of performance criteria. Detailed estimates of construction, monitoring, and management and maintenance costs will be developed and these will serve as the basis for the surety bond.

33. The California Environmental Quality Act (CEQA) requires all projects approved by State agencies to be in full compliance with CEQA, and requires a lead agency to prepare an appropriate environmental document (EIR or Negative Declaration) for such projects. The City of Fremont approved the re-development plan for the 768-acre site in 1996, based on a certified final EIR which identified several potential significant impacts to the environment. The impacts were to 105 acres of wetlands and of special status species such as CCG, the VPTS, the CTS, and the BO.

Potential significant impacts to water quality and proposed mitigation measures to avoid or lessen significant impacts to an insignificant level were identified in these EIR. These include Mitigation 6-4 of the Draft Supplemental EIR which describes Policy Open Space

Goal 2.2.1, a requirement for "no net loss of wetlands as a result of development in Fremont." In addition, there are Special Status Species mitigations and Vegetation mitigations, similar to the performance criteria goals in this Order. These mitigation measures are incorporated as requirements of this Order.

34. Pursuant to Title 23, California Code of Regulations Section 3857, the Board is issuing WDRs and will not act on the Dischargers' application for Water Quality Certification.

35. The Board has notified the Dischargers and interested agencies and persons of its intent to prescribe WDRs for this discharge.

36. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Dischargers, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. The direct discharge of wastes to surface waters or surface water drainage courses is prohibited.

2. The discharge of oil, gasoline, diesel fuel, any petroleum derivative, any toxic chemical, or hazardous waste is prohibited.

3. The discharge of waste shall not cause a pollution or nuisance as defined in Section 13050 of the California Water Code.

4. At no time shall surplus or waste earthen materials be placed in surface drainage courses or ponded areas, or in such a manner as to allow the discharge of such materials to adjacent undisturbed land or to any surface water drainage course except as authorized by the Order and described in Finding 1 and 2, and Provision B. 30.

5. Discharges of materials which are not otherwise regulated by a NPDES permit or allowed by this Order to waters of the State are prohibited.

6. In accordance with Section 13260 of the California Water Code, the Dischargers shall file a report with this Board of any material change or proposed change in the character, location, or volume of the discharge. Any proposed material change in the operation shall be reported to the Executive Officer at least 30 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant new soil disturbances, all proposed expansions of development, or any change in drainage characteristics at the project site.

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7. The Dischargers shall immediately notify the Board by telephone whenever an adverse condition occurs as a result of this discharge. An adverse condition includes, but is not limited to, a violation or threatened violation of the conditions of this Order, significant spill of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance. Pursuant to Section 13267(b) of the California Water Code, a written notification of the adverse condition shall be submitted to the Board within two weeks of occurrence. The written notification shall identify the adverse condition, describe the actions necessary to remedy the condition, and specify a time table, subject to the modifications of the Board, for the remedial actions.

8. The groundwater shall not be degraded as a result of project construction and related activities.

B. Provisions

1. The Dischargers shall comply with all the Prohibitions and Provisions of this Order immediately upon adoption of this Order or as provided below.

2. To reduce impacts from increased runoff and increases in pollutants in runoff from the project site, the Dischargers shall implement Best Management Practices (BMPs). As of the date of adoption of this Order, the specific BMP Plan for the project has not been finalized. The Dischargers shall submit a BMP Plan, including permanent stormwater pollution control measures to be constructed as part of the development project, and maintained for the life of the project, subject to the approval of the Executive Officer, no less than 30 days prior to the initiation of development-related ground disturbance activities. The BMP Plan may be amended with written approval of the Executive Officer.

3. To avoid spills during construction, which have the potential to impact the site's water quality, the Dischargers shall develop and submit a Storm Water Pollution Prevention Plan (SWPPP) for approval by the Executive Officer prior to construction. The SWPPP shall identify and detail storm water pollution prevention measures that will be constructed and implemented at the site.

4. The Dischargers shall notify the Board in writing 30 days prior to actual start dates for each phase of wetland and development construction.

5. The Dischargers shall at all times fully comply with the engineering plans, specifications, and technical reports submitted with the Dischargers' application for water quality certification and the completed report of waste discharge. The Dischargers' plans describe a total of 77 acres of mitigation wetlands to be constructed. Of this total, 69 acres will be constructed on a 391-acre Preserve, which is adjacent to the project and the Refuge, and 8 acres will be constructed on the 53-acre Stevenson parcel which is located north of the project. The 77 acres of constructed wetlands are designed to primarily function as vernal pool habitat. Additional mitigation will be undertaken by the Dischargers as required by Provision B. 26.

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6. To reduce the potential impacts to water quality, the Dischargers will divert any flow around construction and/or restoration work within waterbodies using a diversion channel, pipe, or other practices such that the flow does not flow across the work area and no equipment operates in areas of flowing or standing water.

7. All reports pursuant to these Provisions shall be prepared under the supervision of a suitable professional registered in the State of California.

8. The discharge of any hazardous, designated or non-hazardous waste as defined in Title 27, Division 2, Subdivision 1, Chapter 2 of the California Code of Regulations shall be conducted in accordance with applicable state and federal regulations.

9. The Dischargers shall remove and relocate any wastes which are discharged at any locations on or off the site in violation of this Order.

10. The Dischargers shall file with the Board a report of any material change or proposed change in the character, location, or quantity of this waste discharge. For the purpose of these Requirements, this includes any proposed change in the boundaries of the components of the project on the site.

11. The Dischargers shall maintain a copy of this Order at the site so as to be available at all times to site operating personnel.

12. The Dischargers are considered to have full responsibility for correcting any and all problems which arise in the event of a failure which results in an unauthorized release of waste or wastewater.

13. The Dischargers shall permit the Board or its authorized representative, upon presentation of credentials:

    a. Entry on to the site or any premises in which records are kept.

    b. Access to copy any records required to be kept under the terms and conditions of this Order.

    c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this Order.

    d. Sampling of any discharge or surface water covered by this Order.

Monitoring and Mitigation Plan

14. The Dischargers shall submit a Final Mitigation and Monitoring Plan (MMP) for Phase 2, subject to the approval of the Executive Officer, no less than 30 days prior to the initiation

of development-related ground disturbance activities in either Development Area A or mitigation Preserve Phase 2. If Phase 2 is constructed after 1999, the MMP will be submitted no less than 60 days prior to initiation of construction-related ground disturbance activities. This MMP may contain design elements which will require adaptation and refinement in the field during construction, but the final design wetland acreage for the phase must be specifically defined. The Discharger shall submit a monitoring plan for Phase 1, which has already been constructed, 60 days after the adoption of this Order, subject to the approval of the Executive Officer. The Dischargers shall submit MMPs for Phases 3 and 4 on April 1 of each of the years these Phases are to be constructed, subject to the Executive Officer's approval. Phase 3 will be constructed the year after Phase 2, and Phase 4 will be constructed the year after Phase 3. These MMPs shall include specific performance criteria and final designs for re-creation of vernal pools and seasonal wetlands.

The MMPs will also contain the form and projected content of the annual reports to be submitted each year of the ten year monitoring period. These reports will include descriptions of monitoring methods used, locations sampled, representative photographs, results of monitoring, reference site data and analysis, condition of sensitive species, wildlife use, aquatic invertebrate community development, management actions taken, and responsible parties, and recommendations, and other appropriate items. These reports will be due on July 1 of each year, unless another date is approved by the Executive Officer.

Mitigation will occur in four phases, (see Figure 3, Attachment A). Construction and fill will occur in two phases. The first phase in Development Area A, (see Figure 2, Attachment A) will occur upon receipt of all relevant permits. The second phase of development construction and fill in Development Area B will occur after Phase 1 of the mitigation, the Pilot wetland, demonstrates VPTS reproduction over three wet seasons, one of which has already been successfully demonstrated. At least 50% of all pools created specifically as VPTS habitat in Phase 1 (at least 9 pools) will have gravid female VPTS for 3 years. In year when no gravid female VPTS are found in the "Oklahoma" pond, at least 25% of the Phase one VPTS ponds must have gravid female VPTS. The presence of eggs during dry sampling years will not be adequate proof of success, unless there is a means of distinguishing between eggs that were translocated and eggs that were laid *in situ*. Sampling should follow protocols recommended by the U.S. FWS.

If the VPTS reproduction project is not successful after two more wet seasons, the Dischargers will either (1) withhold from developing Development Area B until a total of two additional reproductive seasons have been achieved, or (2) proceed with developing Development Area B after aquiring property and concurrently creating, restoring and preserving new habitat equivalent in acreage and habitat to that lost by filling the Oklahoma pool, subject to the approval of the FWS and the Executive Officer. Each phase will be monitored for a minimum of ten years from the date of construction. The dischargers shall notify the Board in writing of the actual start dates of each phase of mitigation. Any substantive future changes to the Final MMP must be approved in writing in advance by the Executive Officer.

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Mitigation Performance Criteria

15. The Dischargers shall determine the success of the implemented mitigation by assessing three primary types of habitat: vernal pools, vernal pool tadpole shrimp (VPTS), and seasonal wetlands. Performance criteria, partially listed in Provision 17. through 20., and which will be more fully proposed by the Dischargers in the MMPs, will be measured, analyzed, and reported over a ten-year monitoring period. In the event that the performance criteria are not met, contingency steps spelled out in Provision 21. and 22. will be carried out, and the monitoring period will be extended by at least two years as specified in Provision 21. In the event that the performance criteria are rendered unreliable due to unforeseen inadequacies of the selected Reference Site, as determined by the Executive Officer, new performance criteria will be established as specified in Provision B. 22..

16. The Dischargers will sample and analyze data from at least 20% of the vernal pools and seasonal wetlands on the Preserve unless modified by the Executive Officer. Selection of sample sites should insure adequate representation of all vernal pools and seasonal wetlands. The final sampling plans for each phase will be subject to the approval of the Executive Officer. Aerial photography will be assessed annually to assure that hydrology and vegetation are functioning as planned and, to the extent possible, to determine the rate of spread of invasive species. Recommended aerial photography scales are 1 inch = 1000 feet for original flight photography, and 1 inch = 200 feet for photographic enlargements, other resolutions may be acceptable. Annual flights should be scheduled based on peak growth for vernal pool vegetation or seasonal wetland vegetation.

The success of pools and wetlands will be based on a review of the hydrology, vegetation, and presence of target species on a case by case basis for each sampled pool or wetland.

Hydrology

17. The Dischargers will assess the following performance criteria for hydrology in the created vernal pools, seasonal wetlands, VPTS habitat, and California Tiger Salamander (CTS) habitat. To assure reliable depth measurements, staff gauges in each pool sampled will be tied to the same depth in reference pools:

(a) Vernal Pools: the number of days to fill, the number of days pools remain filled, and the number of days to drain must all be within 15% of the range of means for the reference vernal pools over the same period.

(b) VPTS habitat: must have standing water > 0.2 ft for at least 60 consecutive days for years when total rainfall is at least 75% of normal.

(c) CTS breeding habitat: will contain standing water continuously between January1 and June 1 in years of average or above-average rainfall.

(d) Seasonal Wetlands: the mean number of consecutive days over which the upper 0.5 ft. of soil at the swale is saturated or inundated exceeds 30 days.

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Vegetation

18. The Dischargers will assess the following performance criteria for vegetation:
19.

(a) Vernal Pools: the vegetation will be dominated by native vernal pool vegetation; the number of vernal pool species will be at least 80% of the average number of vernal pool species in the source or reference pools; the total canopy cover of vernal pool species will be at least 50% of the average cover of vernal pools species in the reference pools; the total cover will show no significant declines, and qualitative assessments of vigor and reproductive success will show no substantial differences between the Preserve and the Reference Site or source wetlands during the monitoring period.
(b) Seasonal Wetlands. [Same as for Vernal Pool vegetation except that species dominance and diversity will be based on hydrophytic wetland indicator species (OBL, FACW, or FAC) instead of on vernal pool species.].
(c) VPTS habitat: percent vegetation will cover be < 30%, and thick organic matter will not cover more than an additional 30%.

19. The Dischargers will provide the following lists for all phases of the project subject to the approval of the Executive Officer:

(a)vernal pool species expected to be found on the Preserve

(b) a list of hydrophytic wetland indicator plants likely to occur on the Preserve. This list can contain Italian Ryegrass (*Lolium multiflorum*) as a FAC wetland species, but it will not be used as a dominant in the determination of the wetlands nor will it occupy the bottom of the vernal pools, unless acceptable to the Executive Officer.

(c) a list of invasive plant species that will be controlled. Currently the proposed list is "Exotic Pest Plants of Greatest Ecological Concern in California as of August 1996". Should any plants listed as A-1, A-2, or B occur within the Preserve, the Discharger shall develop and implement a plan to control these species such that their populations will not expand and will eventually be eliminated to the extent that they do not have a significant impact on the ecological function of the Preserve." This list will be amended, if necessary, by the Executive Officer, based on the professional judgment of the resource agencies.

Wetland Species

20. The Dischargers will assess the following performance criteria for special status species:
(a) VPTS will be provided with standing water at >0.2 ft for at least 60 consecutive days during years when total rainfall is at least 75% of normal; vegetation will be hydrophytic and total cover will be less than 30%; organic matter will cover no more than 30% of bottom; and VPTS will be present in two-thirds of the sampled habitats established for it. A minimum of 31 acres of VPTS habitat occupied by VPTS should replace that considered suitable for VPTS and which will be lost to the development project. Success will be determined by the Executive Officer in consultation with the FWS and DFG at years 5 and 8 based on a

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minimum VPTS density that will consider data from the Reference Site and other areas occupied by this species.

(b) Success of Phase 1 will depend on the presence and reproduction of adult VPTS for 3 years in wetlands designated as their habitat when wetlands contain water, unless dry-season sampling is necessary.

(c) The preserved CTS breeding ponds will be monitored to determine if they contain standing water continuously between January 1 and June 1 in years of average or above-average rainfall. If monitoring fails to show this outcome, the Dischargers will propose corrective management measures to the satisfaction of the Executive Officer. The location of rainfall gauges will be specified in the MMP and is therefore subject to the Executive Officer's approval.

CTS breeding will be surveyed by aquatic sampling twice annually, once during March 15 to April 15 and once during April 15 to May 15 according to CDFG protocols, in a representative subset of pools suitable for CTS breeding, submitted as part of the MMP. Monitoring must show that the breeding success in the monitored ponds is stable or increasing, unless instabilities or declines are occurring on the Reference Site. If monitoring fails to show this outcome, the Dischargers will propose corrective management measures to the satisfaction of the Executive Officer.

Contingency Measures

21. If monitoring shows a mitigation wetland to be unsuccessful after construction, and one year of repair does not lead to marked improvement, the Dischargers shall construct a replacement wetland the following year, and the ten year monitoring program will begin again.

If more than 30% of any individual failing mitigation wetlands must be repaired, then monitoring for those wetlands will be extended for 2 years. If less than 30% of any individual failing mitigation wetlands must be repaired, then the monitoring schedule can continue through year 10. If more than 30% of the wetlands in any of the phased mitigation and restoration areas require significant repair of any type, then the entire phased mitigation and restoration area will be monitored for an additional 2 years.

22. If the Executive Officer finds that the Preserve fails to meet the performance criteria by Year 7, then the Dischargers shall propose possible mitigation replacement off site. If the Preserve has failed to meet the performance criteria by Year 10, then wetland replacement will be required at a minimum ratio of 2 acres restored or created for each of the acres lost of the 77-acre mitigation. The Dischargers may submit rationale demonstrating why an alternative level of wetland replacement is appropriate. If off-site mitigation replacement is required, the new site will seek to restore the same type of wetland habitat lost by the development project. Those wetland types are vernal pools, seasonal wetlands, wet meadows, and transitional and upland habitats. Off-site replacement wetland mitigation will occur at one or more of the properties listed on the Refuge's description of property within the Refuge boundaries not currently owned by the Refuge, or properties that may

otherwise be identified by the Refuge and the Executive Officer.

Since many of the performance criteria are tied to the success of vernal pools and seasonal wetlands on the Reference Site, the Dischargers will submit new performance criteria, subject to Executive Officer approval, in the event that the Reference Site becomes unsuitable based on an Executive Officer determination. U.S. EPA's Vernal Pool Monitoring Guidelines (Appendix A, Draft, March 24, 1994) will be considered in developing any new performance criteria for vernal pools.

Long Term Management of the Preserve

23. The Dischargers will prepare, as part of the Long-Term Management Plan, a plan for determining what kinds and how many ungulates or sheep per unit area will provide optimal grazing to control invasive species while avoiding the target native species. This plan should include tests that will be applied to grazed lands to determine the most environmentally sound grazing plan. This scheme will be submitted to the Executive Officer by January 2005 to allow ample time for the Preserve to become established.

24. When the Dischargers have determined that mitigation has achieved success criteria for each phase of mitigation implementation, they shall submit a notice of mitigation completion, acceptable to the Executive Officer. The notice of mitigation completion shall include a plan for long-term maintenance and management, including funding in perpetuity for these management activities, which is acceptable to the Executive Officer, for each mitigation phase. After acceptance by the Executive Officer of the notice of completion, submittal of annual mitigation reports for the mitigation phase is no longer required.

25. The Dischargers shall submit a surety bond in the amount of $10,000,000 to secure the construction, operation, and maintenance, and possible repair of mitigation waterbody areas. A substantial portion of the total initial bonding amount shall be retained until the end of the ten year monitoring period as security for possible repair of the mitigation, and other contingencies. The Bond shall be held by Catellus and a surety incorporated under the laws of its state, and authorized to execute bonds and undertakings a surety, in favor of the San Francisco Bay Wildlife Society, or any other qualified organization approved by the FWS, and the Board. The bond shall terminate upon approval by the Executive Officer that the mitigation plan has been implemented and performance criteria have been met. Portions of the bond equal in cost to the mitigation construction phases, may be released upon completion of the wetland mitigation construction phases, upon submittal of reports of completion for each Phase, subject to approval by the Executive Officer. The Board will take necessary action to recover the bond if the Dischargers fail to meet the mitigation requirements. Alternative means of providing necessary financial assurances shall be allowed only with the approval of the Executive Officer.

26. Additional Mitigation to be Provided by the Dischargers

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a) Refuge Capital Improvements With Maintenance Endowment

The Dischargers will provide funding for capital improvements, with a maintenance endowment, for the Refuge's existing 255-acre Seasonal Wetlands Unit. The Dischargers shall submit a plan and schedule for providing such funding, acceptable to the Executive Officer, by September 3, 1999.

b) Additional Mitigation Property

The Dischargers will acquire additional wetlands habitat acreage, or land on which additional mitigation can be constructed, from the Refuge's list of desirable acquisitions (Attachment C.). This acquisition and the conveyance to the Refuge of this acquisition shall include appropriate capital improvements, such as fencing.

The Dischargers shall report to the Executive Officer on progress of completing this acquisition and conveyance to the Refuge within one year of the adoption of this Order. This acquisition and conveyance to the Refuge shall be acceptable to the Regional Board and shall occur before Development Area B, in Figure 2., can have development-related ground disturbance or construction occur.

27. The Dischargers shall be considered to have a continuing responsibility for ensuring compliance with the Prohibitions, and Provisions of this Order in the operations or use of the site. The Dischargers shall notify the Board when a change in ownership to the Refuge occurs for the 391-acre Preserve and 53-acre Stevenson Parcel.

28. These Requirements do not authorize commission of any act causing injury to the property of another or of the public; do not convey any property rights; do not remove liability under federal, state or local laws, regulations or rules of other programs and agencies nor do these Requirements authorize the discharge of wastes without appropriate permits from other agencies or organizations.

29. The Dischargers shall submit copies of all necessary approvals and/or permits for the project and mitigation projects from applicable government agencies, including DFG, the FWS, and the Corps, prior to the start of construction.

30. These Requirements permit the discharge of earthen fill material into 46 acres of delineated wetland, seasonal wetland, vernal pools, and wet meadows within the 305-acre development area in Figure 2, Attachment A, on the Pacific Commons site, and other minor discharges incidental to restoration of the mitigation waterbody areas. Of this 46 acres, 21.5 have been disclaimed from Corps jurisdiction. The fill of Development area A within the project site can occur upon the approval of applicable permits and these Requirements. The fill of Development area B cannot occur until VPTS have reproduced for three winter seasons in the Phase 1 mitigation area (Figure 3 , Attachment A), or as otherwise described in Provision B. 14. and until the land acquisition and conveyance required in Provision B. 26. is completed.

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31. This Order and Permit may be modified, revoked and reissued, or terminated in accordance with applicable State regulations. Cause for taking such actions includes, but is not limited to:
    a. Violation of any term or condition contained in the Order and Permit;

    b. Obtaining the Order and Permit by misrepresentation, or by failure to disclose fully all relevant facts; and

32. Duty to Provide Information: The Dischargers shall furnish, within a reasonable time, any information the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit. The Dischargers shall also furnish to the Board, upon request, copies of records required to be kept by its permit.

33. All of the documents which the Dischargers are required to submit for the Executive Officers approval will be incorporated in an ongoing manner, into one single document, titled the "Compiled Mitigation Design, Monitoring Plan and Long Term Management Plan for the Pacific Commons Project, with Related Plans and Requirements".

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, complete and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on July 21, 1999.

Loretta K. Barsamian
Executive Officer

Attachments:

A - Figures
B – Summary of Due Dates
C - List of Desirable Properties for acquisition by the Refuge.

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ATTACHMENT A

FIGURES

Figure 1. Grading Plan for Pilot Mitigation Wetland, Phase 1

Figure 2. Overall Site Plan Showing Development Phases A and B

Figure 3. Site Plan with Four Wetland Mitigation Phases Indicated

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ATTACHMENT B

SUMMARY OF DUE DATES

ORDER NO. 99-061

Report	Permit Provision	Due Date for Submittal
Annual Mitigation Monitoring Reports	B. 14	July 1, during Ten Year Monitoring period or longer, per Provision B. 21.

Annual reports shall be submitted by the above calendar dates every year from 1999 until submittal of the final notice of completion of mitigation, and transfer of the Preserve to the Refuge, acceptable to the Executive Officer.

Mitigation and Monitoring Plans	B.14	Phase 2, 30 days prior to earth disturbance for Development Area A Phase 3, April 1 of year following Phase 2 construction Phase 4, April 1 of year following Phase 3 construction
Target Vegetation Lists (1) Native Vernal Pool Species (2) Hydrophytic Wetland Vegetation including Indicator Status (3) Invasive Plants to be Controlled Including indicator status	B. 19	December 1, 1999
LTMP Experimental Plan	B. 23	January 1, 2005
Refuge SWU Capital Improvement and Long Term Maintenance Funding	B. 26	September 3, 1999

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Plan

Report on Progress Toward Acquisition Of Additional Wetlands	B. 26	One year from adoption of this Order

AMENDMENT TO MITIGATION AGREEMENT
PACIFIC COMMONS PROJECT IN FREMONT, CALIFORNIA

This AMENDMENT (the "**Amended Agreement**") TO THE MITIGATION AGREEMENT BETWEEN CATELLUS DEVELOPMENT CORPORATION ("CDC") AND THE CALIFORNIA DEPARTMENT OF FISH AND GAME ("Department"), DATED AUGUST 8, 1997, (the "**Original Agreement**") is made by and between CDC and the Department. CDC and the Department are hereinafter together sometimes referred to as "**the Parties.**"

I. RECITALS

A. The purpose of this Amended Agreement is to provide for the mitigation of adverse impacts to California tiger salamander (*Ambystoma californiense*) ("**CTS**") caused by CDC's completion of the remainder of the Pacific Commons development project located southwest of Interstate 880 between Auto Mall Parkway and Cushing Parkway in the City of Fremont, County of Alameda, State of California, as depicted on Exhibit A ("**Project Site**"). CDC is completing development of a portion of the Project Site referred to in Exhibit A as "PM 7123" (including approximately 39 acres of CTS habitat) and upon receipt of all requisite agency approvals intends to do the following (all as described in the US Army Corps of Engineers Public Notice, #220851S, dated September 10, 1998, and referred to hereafter as the "**Project**"): (i) complete additional industrial/commercial development within the remaining portions of the Project Site depicted as the "Development Area" (including approximately 289 acres of CTS habitat), (ii) complete the Cushing Parkway within the portion of the Project Site depicted as the "Proposed Preserve" (including approximately 7 acres of CTS habitat), and (iii) transfer to the City of Fremont ("City") the portion of the Project Site identified for development of a recreational park and detention basin (including approximately 59 acres of CTS habitat impacts). Pursuant to this Amended Agreement, CDC intends to provide for the mitigation of impacts to CTS and CTS estivation habitat at the Project Site caused by the proposed Project.

B. The Parties agree that CDC's proposed development of the Project will result in permanent impacts to as many as 400 acres of CTS estivation and breeding habitat at the Project Site, resulting in the take of individual CTS.

C. The Department desires, consistent with the policies of Section 1802 of the F&G Code, that there be permanent protection for CTS and its habitat to assure the conservation, restoration, and long-term survival of this species.

D. CDC agrees to undertake the mitigation measures set forth in this Amended Agreement to offset the adverse impacts to CTS caused by completion of the Project.

NOW THEREFORE, the Parties agree as follows:

II. AMENDED AGREEMENT

1. Upon receipt of all approvals, consents, declarations, permits, licenses, certifications or other entitlements required from the US Army Corps of Engineers, the US Fish and Wildlife Service, the San Francisco Bay Regional Water Quality Control Board, the City of Fremont, and all other public agencies prior to commencement of grading activities, CDC shall notify the Department in writing: (1) that CDC has obtained all approvals, consents, declarations, permits, licenses, certifications or other entitlements required prior to grading for the Project, and (2) that CDC intends to rely on those approvals, consents, declarations, permits, licenses, certifications or other entitlements to commence grading. This written notice must be delivered to the Department prior to commencement of grading, but no more than 45 days after all pre-grading approvals, consents, declarations, permits, licenses, certifications or other entitlements on which CDC intends to rely are obtained, provided that the 45-day period shall be tolled on a day-to-day basis so long as there is a pending appeal or lawsuit against the project. The date the written notice described in this section is delivered to the Department is hereinafter referred to as the "Date of Notification." CDC's obligation to acquire, preserve and transfer up to 145 acres of existing CTS estivation habitat management lands, as specified in paragraph 3 and other paragraphs of the Original Agreement, is extinguished on the Date of Notification. On the date this Amended Agreement is executed, such obligation is suspended and will be reinstated only in accordance with the terms of paragraph 12 of this Amended Agreement.

2. CDC agrees, within six months after the Date of Notification, to acquire fee title to or a conservation easement over 400 acres of existing CTS estivation habitat management ("HM") lands or lands containing 400 acres of such habitat and to transfer fee title or conservation easement to those lands to the Department or, subject to the Department's approval, which shall not be unreasonably withheld, to another public entity or non-profit organization. All conditions of title and all terms of the conservation easement are subject to the Department's approval, which shall not be unreasonably withheld. CDC agrees to obtain the Department's approval of the HM lands for their biological suitability prior to any purchase and transfer of HM lands.

3. The Parties agree that biologically suitable HM lands for purposes of mitigating CTS impacts at the Project Site include, but are not limited to, the following sites: (a) approximately 840 acres of a portion of the property known as the "Kammerer Ranch" located generally northwest of Joseph D. Grant County Park, northeast of Cherry Flat Reservoir and west of Arroyo Honda/Isabel Creek in the unincorporated area of the County of Santa Clara; and (b) 400 acres of a portion of the property known as the "Souza Property" located generally in eastern Contra Costa County and bordered to the south and east by the Vasco Caves Preserve operated by the East Bay Regional Park District, and Vasco Road to the east, provided CTS breeding pools are created on the Souza Property. Subject to approval by the Department of a site-specific CTS mitigation management plan, permanent protection by CDC of either the 840 acre portion of the Kammerer Ranch, as is, or the 400 acre portion of the Souza Property, contingent upon CTS

breeding pool creation, would serve to discharge CDC's off-site CTS mitigation obligation in full.

4. CDC agrees to comply with the mitigation requirements set forth in the "Pac Com CTS Mitigation Requirements" document dated September 21, 1998 (Exhibit B). CDC's acquisition of HM lands as provided herein, along with the mitigation measures set forth in Exhibit B, will fully mitigate all impacts to CTS due to grading, development and other permitted activities at the Project Site, including, but not limited to, impacts to CTS associated with any stream or lake alteration undertaken pursuant to Division 2, Chapter 6 of the F&G Code. If CDC fails to timely complete the acquisition of HM lands, or fails other duties identified in this Amended Agreement within the time periods specified in any material respect, the Department, at its option, may demand that CDC cure its breach forthwith. If CDC fails to cure the breach within 30 days, the Department may draw upon the security, described herein in paragraph 7, to complete the required acquisition of HM lands and seek other available remedies.

5. Paragraph 4 of the Original Agreement is retained intact, except that the third and fourth sentences are deleted.

6. Paragraph 5 of the Original Agreement is retained intact, except that the first, second and third sentences are deleted, and the following language is substituted in lieu thereof:

> "Except as may be subsequently agreed to in writing between the Parties, and subject to paragraph 12 of this Amended Agreement, CDC agrees to provide the Department or non-profit corporation, as applicable, with a check for $436,000 (400 acres multiplied by $1,090 per acre) to establish an endowment for the long-term management of the HM lands. CDC shall transfer these funds upon the transfer of title or conservation easement to the HM lands and approval of a site-specific CTS mitigation management plan proposed by CDC. The funds shall be in the form of a check drawn from a banking institution located within California. The Department will consider reducing the endowment requirement after the Department approves a management plan for the HM lands if the Department determines that a reduced endowment amount will provide for adequate management of the HM lands in perpetuity, including the Department's costs of monitoring the HM lands."

7. The text of Paragraph 7 of the Original Agreement is deleted in its entirety, and the following language is substituted in lieu thereof:

> "CDC may proceed with activities that adversely affect CTS before fully performing its duties and obligations in this Amended Agreement if CDC secures its performance by establishing a surety bond ("**Security**") in substantially the same form as Exhibit 2 within ten business days after the date of execution of this Amended Agreement. The Security shall designate the Department as beneficiary, and shall be in an amount sufficient to fund the performance of CDC's unperformed duty or obligation, as such costs are estimated

below. If CDC does not fulfill its obligation to acquire, protect, enhance and manage HM lands as set forth in this Amended Agreement, CDC shall pay the Department the estimated cost of performing any unperformed obligation in the amounts set forth below. In the event that CDC does not pay such a sum to the Department after 10 days' written notice of such an amount being due, the Department may draw on the Security and use such funds to acquire, protect, enhance and manage HM lands. CDC agrees to secure its performance of duties outlined in this Agreement, with Security in the amount of $4,496,000, which equals the sum of (1) $60,000 for initial protection and enhancement of HM lands approved by the Department, (2) $4,000,000 (400 acres multiplied by $10,000 per acre) for acquisition and/or preservation of HM lands, and (3) $436,000 (400 acres multiplied by $1,090 per acre) for an endowment to fund management of such HM lands. If CDC notifies the Department pursuant to paragraph 12 of this Amended Agrement that it will not proceed with the Project, the amount of Security will be adjusted to reflect CDC's obligations in the Original Agreement."

8. CDC agrees to modify or replace the existing Security established pursuant to the Original Agreement to reflect the performance obligation stated in paragraph 7 of this Amended Agreement.

9. The first paragraph of Paragraph 8 of the Original Agreement is retained intact, except the first sentence of paragraph 8 is deleted and replaced by the following text:

"The Department estimates that CDC's costs for the acquisition and transfer of suitable HM lands totaling 400 acres of CTS habitat will be $4,000,000 ($10,000 per acre)."

10. The second paragraph of Paragraph 8 of the Original Agreement is deleted in its entirety, and the following language is substituted in lieu thereof:

"Upon execution by CDC of a purchase and sale agreement for HM lands approved by the Department (approval of which shall not be unreasonably withheld), the Department will consider a request from CDC to reduce the $4,000,000 portion of the Security (400 acres multiplied by $10,000 per acre) referenced in paragraph 7 above to an amount equal to 200 percent of the HM land purchase price contained in the executed purchase and sale agreement if such amount is less than $4,000,000. Such a request must be accompanied by a copy of the complete purchase and sale agreement. Upon CDC's transfer of the HM lands and funding of the endowment pursuant to this Amended Agreement, the Department shall accept a reduced Security in the amount of $60,000 as replacement for the Security required pursuant to paragraph 7 of this Amended Agreement. The Department shall effectuate a cancellation of this $60,000 Security upon completion by CDC of the obligations to initially protect and enhance the HM lands. CDC desires to proceed with the Project prior to the performance of acquisition and protection duties identified in this Amended Agreement."

11. The text of paragraph 14 of the Original Agreement is deleted, and the following is substituted in lieu thereof:

> "Except as otherwise provided in this Amended Agreement, the terms, conditions, rights and obligations set forth in the Original Agreement shall remain in full force and effect. The Original Agreement, as amended by this Amended Agreement, comprises the entire agreement and understanding between the Parties concerning the CTS mitigation required for the Project. It supersedes all prior and contemporaneous agreements, representations or understandings, whether oral or written."

12. If CDC does not obtain the approvals, consents, declarations, permits, licenses, certifications and other entitlements needed to commence grading for the Project, or for any other reason does not proceed with grading for the Project, CDC shall comply with the requirements in the Original Agreement regarding acquisition, transfer, initial protection and enhancement of HM lands and funding of the endowment, except that CDC shall have 18 months from the date of the execution of this Amended Agreement to complete the acquisition and transfer of HM lands. CDC shall inform the Department in writing of any decision by CDC to forego further efforts to obtain necessary approvals for the Project or otherwise to not proceed with Project grading and construction.

13. The first sentence of paragraph 18 of the Original Agreement is deleted, and the following is substituted in lieu thereof:

> "This Agreement shall terminate on the earlier of:
>
> > "A. Five (5) years from the date of execution of the Amended Agreement, provided that CTS impacts caused by the Project, including those that have already occurred in Area A, have been mitigated pursuant to the Amended Agreement, or
> >
> > "B. Upon completion of all terms and conditions of this Amended Agreement."

14. The text of paragraph 19 of the Original Agreement is deleted, and the following is substituted in lieu thereof:

> "It is acknowledged that the purpose of this Amended Agreement is to set forth the obligations and rights of the Parties hereto with respect to the Project and to provide for the conservation of CTS and the mitigation and compensatory measures required in connection with the taking of CTS in the course of development of the Project. Accordingly, no further on-site or off-site mitigation or compensation for the conservation of CTS will be required by the Department pursuant to any law, including but not limited to the F&G Code and the California Environmental Quality Act, of CDC for any CTS impacts resulting from development of the Project."

15. In paragraph 20 of the Original Agreement, references to "the Interim Development project area" or "the Interim Development" are replaced with "the Development Area, Recreational Park/Detention Basin, Cushing Parkway Route, and N-1 Channel, as generally depicted on Exhibit A. The following is added to the end of paragraph 20 of the Original Agreement:

> "Any reduction in the HM land requirement under the terms of this paragraph shall be made through a duly executed amendment to this Agreement."

16. The first sentence of paragraph 21 of the Original Agreement is deleted.

17. The following exhibits are added to and incoporated into the Agreement as amended:

EXHIBIT A, PROJECT SITE
EXHIBIT B, PAC COM CTS MITIGATION REQUIREMENTS

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE EXECUTED THIS AMENDED AGREEMENT TO BE IN EFFECT AS OF THE DATE LAST WRITTEN BELOW:

CATELLUS DEVELOPMENT CORPORATION

By: _____

Date: 1-20-99

Mr. Don Little, Vice President, Catellus Development Corporation

CALIFORNIA DEPARTMENT OF FISH AND GAME

By: _____

Date: 1-11-99

Mr. Brian Hunter, Regional Manager, Region 3

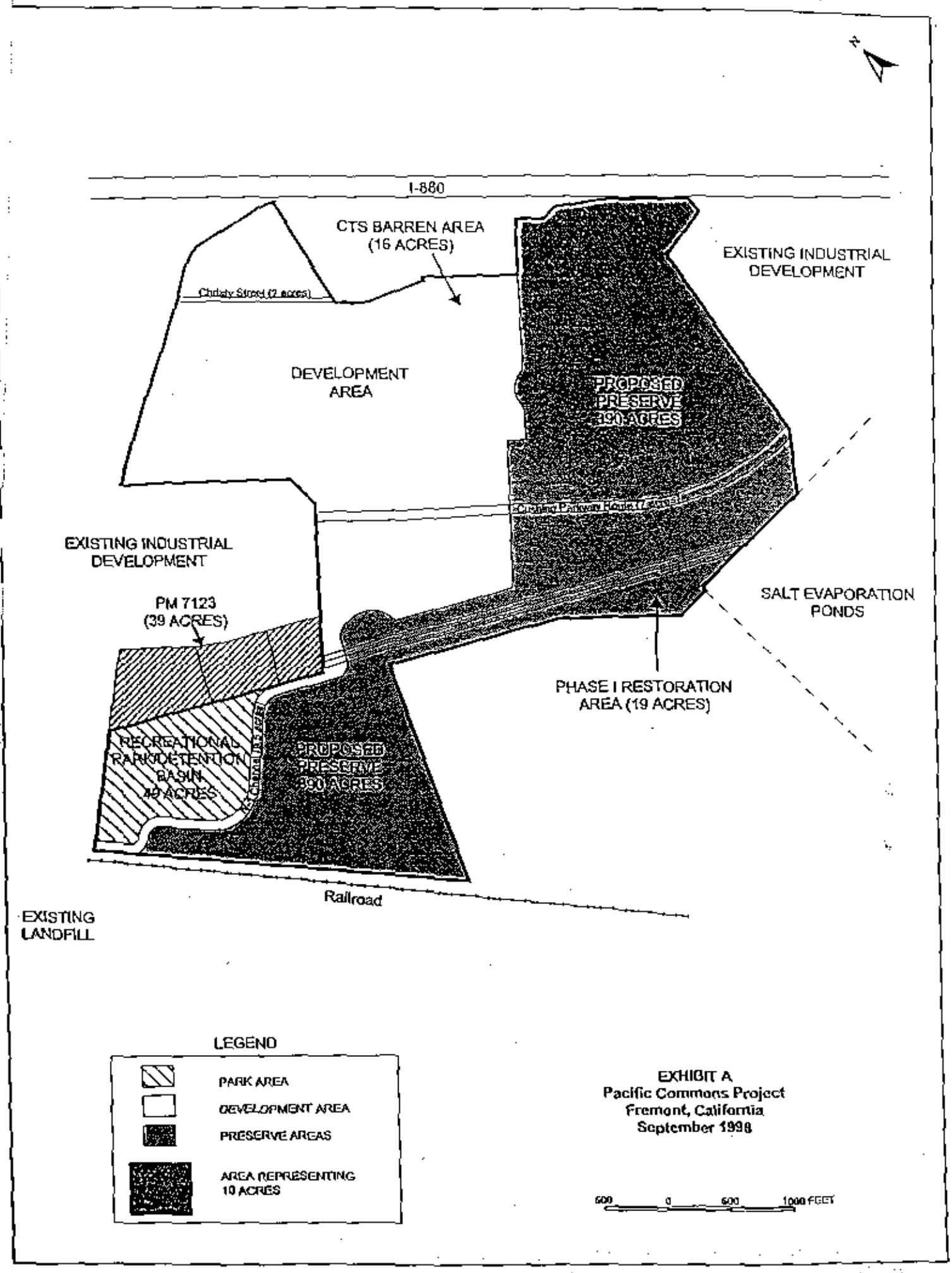

EXHIBIT A
Pacific Commons Project
Fremont, California
September 1998

EXHIBIT B

September 21, 1998
Pac Com CTS Mitigation Requirements:

I. ACREAGE

PM 7123	38.59 acres
Park	49.35 acres
New N-1	9.51 acres
Cushing (Preserve)	6.91 acres
Development Area (exclusive of the Christy Concrete barren area (15.90 acres) and the Christy Street (2.06 acres))	288.94 acres
Powerline Phase I Restoration area (because won't be able to trap before commence grading in 10/98)	19.32
TOTAL	412.62 acres

Acceptable off-site mitigation:

1) Kammerer Ranch mitigation area (approximately 800 acres), as is, satisfies all Pacific Commons CTS off-site mitigation requirements, OR

2) 400 acres of Souza property, with pool creation, satisfies all Pacific Commons CTS off-site mitigation requirements.

II. CTS TRAPPING (SALVAGE) REQUIREMENTS

1) Preserve Site: Trap for adult CTS in all areas of Preserve proposed for restoration, unless otherwise determined not to be CTS estivation habitat by CDFG, in advance of restoration grading (except for Phase I areas which begin this fall). Methods, placement of trap lines, and relocation sites for salvaged individuals to be determined in consultation with CDFG.

2) Development Site: To minimize impacts to CTS in the development area, prior to commencement of construction:

a) Adult Salvage:

i) Construct drift fencing from N-1 Channel near the Stern parcel bridge eastward along the Preserve boundary to the eastern boundary at Christy Concrete to keep Preserve-side CTS from migrating into the development side;

ii) Install and collect any adult CTS in temporary pitfall traps on the development-side of the silt fencing;

iii) For one rainy season only, install drift fencing this fall (prior to the rains) in the area south and east of Oklahoma to capture migrating CTS adults and relocate them to the Preserve.

b) Larvae Salvage:

i) Ask the FWS for a permit to seine some development-side pools this winter for CTS larvae to be relocated in the existing preserve-side pools.

MITIGATION AGREEMENT

BETWEEN CATELLUS DEVELOPMENT CORPORATION

AND THE CALIFORNIA DEPARTMENT OF FISH AND GAME

This Mitigation Agreement ("Agreement") is made and entered into by and between Catellus Development Corporation ("CDC") and the California Department of Fish and Game (the "Department"), collectively "the Parties."

The purpose of this Agreement is to mitigate adverse impacts to the California tiger salamander (*Ambystoma californiense*), caused by the interim development of CDC's Pacific Commons project ("Interim Development") in Fremont, California. California tiger salamander ("CTS") is a Federal Candidate species and a State designated Species-of-Special-Concern.

RECITALS

A. WHEREAS, CDC proposes construct an industrial/commercial development within the 145 acre Interim Development area (Exhibit 1), the central portion of the approximately 800 acre Pacific Commons project site, located southwest of Interstate 880 between Auto Mall Parkway and Cushing Parkway, and to mitigate for impacts to CTS and CTS aestivation habitat which is known to occur throughout the Interim Development area;

B. WHEREAS, the Department is trustee for the fish and wildlife resources of the State of California and has jurisdiction over the conservation and protection of fish, wildlife, and native plants, and the habitat necessary for biologically sustainable populations thereof pursuant to California Fish and Game Code Section 1802;

C. WHEREAS, CTS are known to occur throughout the Interim Development area;

D. WHEREAS, the Interim Development project will result in permanent impacts to 92 acres of CTS aestivation habitat (Area A, Exhibit 1), and may result in impacts to up to an additional 53 acres of CTS aestivation habitat (Area B, Exhibit 1);

E. WHEREAS the Interim Development project will result in the take of individual CTS;

F. WHEREAS, the Department desires, consistent with the policies of California Fish and Game Code Section 1802, that there is permanent protection for CTS and their habitat to assure the conservation, restoration, and long-term survival of this species; and

G. WHEREAS, CDC agrees to undertake the mitigation measures set forth in this Agreement to offset the adverse impacts to CTS caused by the Interim Development project;

NOW THEREFORE, the Parties agree as follows:

1. At least thirty (30) days before initiating ground disturbing activities, CDC shall designate a representative responsible for communications with the Department and for overseeing compliance with this Agreement and notify the Department in writing.

2. CDC shall notify the Department fourteen (14) days before initiating ground disturbing activities.

3. CDC agrees to acquire and preserve 92 acres and up to an additional 53 acres (for a total of 145 acres), of existing CTS aestivation habitat management (HM) lands and to transfer to the Department either fee title to the HM lands or a conservation easement acceptable to the Department. The amount of HM land required will be based on whether or not only Area A, or both Area A and B, are impacted by development. The fee title of the HM lands or a conservation easement may be transferred to a non-profit corporation or public entity approved by the Department under terms approved by the Department. CDC agrees to obtain the Department's approval of the HM lands for their biological suitability prior to any transfer.

a. The required HM lands acreage amount is based upon the agreement between CDC and the Department that all 145 acres within the Interim Development area are CTS aestivation habitat, and that one acceptable method of mitigating impacts to CTS and CTS habitat is off-site preservation of existing CTS habitat at an acreage ratio of 1:1. The HM lands must have existing CTS aestivation habitat throughout the site. CDC agrees to demonstrate that the HM lands are suitable for CTS mitigation by providing survey information which shows CTS distribution throughout the site(s). The total acreage of HM lands protected through this Agreement may be larger than the 92 acres required for Area A, or up to the 145 acres required for Area A plus Area B, because if there are areas on the HM lands that are not suitable for CTS aestivation or breeding, these areas will not count towards the mitigation requirement. Any HM lands protected for the purposes of this Agreement must include areas on-site where CTS can breed successfully. If aestivation habitat exists on the HM lands and breeding ponds are located off-site, CDC will be responsible for creating breeding habitat on the HM lands. CDC agrees to provide the Department a recent preliminary title report and Level I environmental report for the HM lands. All documents conveying HM lands and all conditions of title are subject to the approval of the Department, the Department of General Services and, if applicable, the Fish and Game Commission.

b. CDC agrees to acquire 92 acres of HM Lands within 18 months of CDC's execution of this Agreement. This requirement will mitigate impacts to CTS due to grading and development activities

in Area A (as depicted in Exhibit 1). CDC further agrees to acquire up to 53 additional acres of HM lands within 18 months of receipt of all approvals and permits from the City of Fremont for development in Area B (as depicted in Exhibit 1). CDC shall endeavor to acquire contiguous HM lands. If portions of Area B are permanently protected, the HM land requirement for Area B shall correlate to the amount of acreage developed in that area at a ratio of 1:1. The Parties agree that this bifurcation of the mitigation obligation is justified on the grounds that a portion of Area B may never be developed and may instead be included in a habitat preserve.

c. If CDC fails to complete the acquisition of 92 acres of HM lands within 18 months or other duties identified in this Agreement, within the time periods specified, the Department, at its option, may demand that CDC cure its breach forthwith. If, after 18 months from the date of execution of this Agreement, CDC has failed to complete the acquisition and transfer duties detailed in this Agreement for impacts in Area A or, acquisition and transfer of up to 53 additional acres for impacts in Area B, within the time periods specified, the Departments remedies include, but are not limited to, drawing upon the security to complete the required acquisition of HM Lands.

4. Initial protection and enhancement measures of the HM lands may include fencing, trash clean-up, CTS breeding habitat creation, bull frog removal and/or any necessary habitat restoration. These activities shall be the responsibility of CDC. Alternatively, CDC may fund the Department's initial protection and enhancement activities on the HM lands by providing to the Department two checks in the amount of $30,000 each (one for Area A and one for Area B) drawn from a banking institution located within California. Any unobligated funds shall be returned to CDC upon completion of all items and conditions of this Agreement.

$100,280 DBP $1,090 DBP $67,770 DBP

5. CDC agrees to provide the Department or non-profit corporation, as applicable, with two checks, one in the amount of ~~$92,000~~ for Area A and one in the amount of ~~$53,000~~ for Area B (145 acres multiplied by ~~$1,000~~ per acre) to establish an endowment for the long-term management of the HM lands. CDC shall transfer these funds to the Department upon the Department's approval of the biological suitability, exceptions and conditions of title, and acquisition by the Department or an agent approved by the Department of HM Lands as provided herein. The funds shall be in the form of two checks drawn from a banking institution located within California. Such funding shall be used as principal for a permanent capital endowment. Interest from this amount shall be available for operations, management and protection of the HM lands acquired pursuant to this Agreement. Operation, management and protection activities may include reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action designed to protect or improve the habitat values of the HM lands. Money received by the Department pursuant to this provi-

CDC 8/8/97
Department
DBP

sion shall be deposited in a special account established pursuant to Government Code Section 16370. The Department may pool the endowment with other endowments for the operation, management and protection of HM lands for local populations of the salamander.

6. CDC agrees to reimburse the Department for reasonable expenses incurred as a result of the approval and implementation of this Agreement, including costs of title and documentation review, expenses incurred from other state agency reviews and overhead. The Parties estimate that this Agreement will create an additional cost to the Department of up to $1,000.00 per HM lands acquisition transaction processed.

7. CDC may proceed with activities that adversely affect CTS before fully performing its duties and obligations in this Agreement if CDC secures its performance by establishing a surety bond (security) in substantially the same form as Exhibit 2. The security shall designate the Department as beneficiary, and shall be in an amount sufficient to fund the performance of CDC's unperformed duty or obligation, as such costs are estimated below. If CDC has not fulfilled its obligations for Area A under this agreement within 18 months of the execution of this Agreement, or has not fulfilled its obligations for Area B within the time periods specified. CDC shall pay the Department the estimated cost of performing any unperformed obligation as set forth below. In the event that CDC does not pay such a sum to the Department after 10 days' written notice of such an amount being due, the Department may draw on any security provided pursuant to this Agreement and use such funds to acquire, protect, enhance and manage HM lands. CDC agrees to secure its performance of duties outlined in this Agreement, with Security in the amount of $1,655,000, including (1) $60,000 for initial protection and enhancement of two separate HM land sites (2) $1,450,000 (145 acres multiplied by $10,000 per acre) for the acquisition and/or preservation of habitat lands, and (3) ~~$145,000~~ (145 acres multiplied by ~~$1,000~~ per acre) for the preservation of such habitat lands. $4,000 $158,050

within two business days after the date of execution of this Agreement
/CDC
/Department
8/8/97

8. The parties estimate that CDC's costs for the acquisition and transfer of suitable HM lands totaling 145 acres of CTS habitat will be $1,450,000 ($10,000/acre). Notwithstanding the above estimate, in the event that acquisition costs exceed the projected amount, CDC shall not be released from performance of the duties contained herein unless the Department and CDC agree to modify this Agreement to provide for alternate effective CTS mitigation measures acceptable to the Department. In the event that acquisition costs are less than estimated, CDC's funding obligations shall be reduced to actual acquisition costs.

/CDC
/Department
8/8/97

Upon timely request and upon presentation of documentary evidence of full compliance with the terms and the conditions of this Agreement, the Department shall effectuate a cancellation of the security if such full compliance occurs prior to the natural expiration of the security. CDC desires to proceed with the

Interim Development prior to the performance of acquisition and protection duties identified in this Agreement.

9. The Department, its designee or successor shall hold title to and protect all HM lands conveyed in fee title under this Agreement solely for the purposes of conservation, protection, restoration, and enhancement of CTS. This covenant shall run with the land and no use of such land shall be permitted by the Department or any subsequent title holder or assignee which is conflict with the stated conservation purposes of this Agreement. The Department, its designee or successor may allow some wetland creation and/or limited grazing on the HM lands if said uses do not conflict, in any way, with the conservation goals for CTS.

10. The Department, its designee or successor shall record on each deed a statement that the HM lands described in the deed of record have been conveyed to the Department, its designee or successor for purposes of conservation, protection, restoration and enhancement of CTS. Such statement shall be substantially as provided in Exhibit 3.

11. In the event CDC defaults on any of its material obligations under this Agreement, the Department shall have all rights with respect to any security and all remedies available at law or in equity, including specific performance injunction, and without limitation all rights of a secured party pursuant to the California Uniform Commercial Code.

12. All notices and other communications required or permitted under this Agreement shall be in writing and addressed to the parties at the following addresses, or at substitute addresses subsequently provided to any of the parties:

CDC General Counsel
Catellus Development Corporation
201 Mission Street, 2nd Floor
San Francisco, CA 94105

DEPARTMENT General Counsel
Legal Affairs Division
Department of Fish and Game
1416 Ninth Street, Twelfth Floor
Sacramento, CA 95814
(916) 654-5295

and

Mr. Carl Wilcox
Region 3
California Department of Fish and Game
P.O. Box 47
Yountville, CA 94599
(707) 944-5525

13. Any sale or assignment of this Agreement or any of the rights or obligations thereunder is void absent the written consent of the Parties; provided, however, that no consent shall be required for assignment or pledge made by CDC (a) to any company that shall succeed by purchase, merger or consolidation to the properties of the CDC; or (b) as security for a debt under the provision of any mortgage, deed of trust, indenture, bank credit agreement, or similar instrument.

14. This Agreement comprises the entire agreement and understanding between the Parties concerning the Interim Development project. This Agreement supersedes all prior and contemporaneous agreements, representation or understandings, whether oral or written.

15. This Agreement shall be governed by the laws of the State of California. Actual or threatened breach of this Agreement may be prohibited or restrained by a court of competent jurisdiction.

16. This Agreement is solely for the benefit of the People of the State of California, by and through the Department, or its designated representative and CDC.

17. From time to time, the Parties shall by mutual agreement execute such instruments and other documents, and take such other actions, as may be reasonably necessary to carry out the terms of this Agreement. This Agreement cannot be amended or modified in any way except by a written instrument duly executed by the Parties. In any action requiring the agreement or approval of either of the Parties, such agreement or approval shall not be unreasonably denied or withheld.

18. This Agreement shall terminate three (3) years from the date of execution unless extended by operation of paragraph 2(b) of the Agreement or upon completion of all terms and conditions. In the event this Agreement terminates by law or judicial action prior to the full performance of the management duties and obligations, title to any security provided by CDC shall inure the Department by operation of law on the date of the termination. The obligation to mitigate for impacts to CTS as specified in this Agreement do not terminate with the termination of the Agreement.

19. It is acknowledged that the purpose of this Agreement is to set forth the obligations and rights of the Parties hereto with respect to the Interim Development project and to provide for the conservation of CTS and the mitigation and compensatory measures required in connection with the taking of CTS in the course of otherwise lawful use of lands within Interim Development area. Accordingly, no further mitigation or compensation for the conservation of CTS will be required by the Department of CDC for impacts within the Interim Development project area identified in Exhibit 1.

20. It is further agreed that in the event that: (a) CDC completes additional CTS aestivation area surveys pursuant to Department-approved protocols, prior to any grading, and the results of such surveys show that some portions of the Interim Development project area are not CTS aestivation habitat, then there shall be a corresponding reduction to the total mitigation acreage amounts as CDC shall have no obligation to mitigate for non-CTS aestivation habitat; and (b) if CDC notifies the Department in writing that it will permanently avoid grading and development activities in specified locations and for specified acreages within the Interim Development, then for such avoided areas there shall be a corresponding reduction to the CTS aestivation habitat mitigation acreage amounts required under this Agreement.

21. Prior to the commencement of ground disturbing activities by CDC, CDC shall have the option to terminate this Agreement upon ten (10) days written notice to Mr. Brian Hunter, Regional Manager, Region 3. In the event that impacts occur and impacts are significantly less than anticipated, the Department agrees to negotiate an amendment to this agreement that would tailor the mitigation requirement to the impacts that occurred.

22. This Agreement shall be immediately effective upon execution by the Parties

23. This Agreement includes and incorporates the following:

EXHIBIT 1, INTERIM DEVELOPMENT AREA MAP
EXHIBIT 2, SURETY BOND
EXHIBIT 3, CERTIFICATE OF PUBLIC PURPOSE

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE EXECUTED THIS AGREEMENT TO BE IN EFFECT AS OF THE DATE LAST WRITTEN BELOW:

CATELLUS DEVELOPMENT CORPORATION

By: David B. [signature]

Date: 8-8-97

Its: Vice President / President Catellus Resources Group

Mr. David Friedman, President, Catellus Resources Group

CALIFORNIA DEPARTMENT OF FISH AND GAME

By: Ken Vasen for

Date: 8/8/97

Mr. Brian Hunter, Regional Manager, Region 3

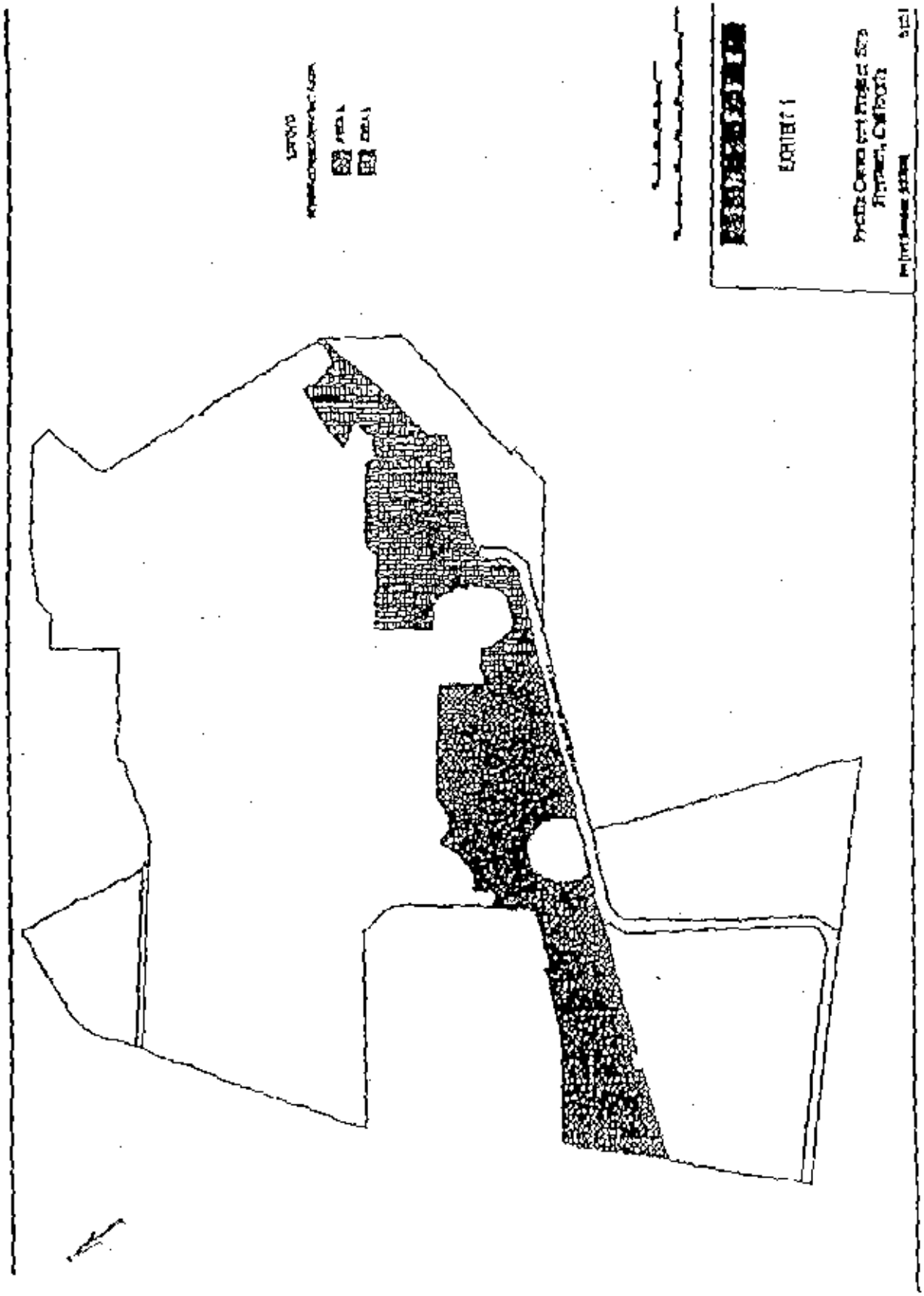
EXHIBIT 1

Exhibit 2
Form of Security

Bond No. _____
Premium (per annum): _____

SURETY BOND

KNOW ALL BY THESE PRESENTS:

That we, CATELLUS DEVELOPMENT CORPORATION, hereinafter referred to as Principal, and _____, hereinafter referred to as Surety, incorporated under the laws of the State of _____, and authorized to execute bonds and undertakings as surety, are held and firmly bound unto CALIFORNIA DEPARTMENT OF FISH AND GAME, hereinafter referred to as Obligee, in the sum of One Million Six Hundred Sixty-eight Thousand Fifty Dollars ($1,668,050), to be paid to the Obligee for the payment of which sum, well and truly to be made, we bind ourselves, our personal representatives, successors and assigns jointly and severally, firmly by these presents.

The condition of the foregoing obligation is such that.

WHEREAS, the above bounded Principal is about to enter into or has entered into a certain agreement with the Obligee for the following.

MITIGATION AGREEMENT
BETWEEN CATELLUS DEVELOPMENT CORPORATION
AND THE CALIFORNIA DEPARTMENT OF FISH AND GAME

The date of which said Agreement was made to the Principal and Obligee on July __, 1997.

NOW THEREFORE, the Principal shall comply with Paragraphs 3, 4 and 5 (acquisition of habitat lands and habitat land maintenance funds) of the said MITIGATION AGREEMENT, in the manner and at the time therein provided, then this obligation shall be void, otherwise to be and remain in full force and effect.

PROVIDED, HOWEVER, this bond is issued subject to the following express conditions:

1. The bond shall be deemed continuous in form and shall remain in full force and effect until canceled after which all liability ceases.

2. That in no event shall the aggregate liability of the Surety hereunder be cumulative from year to year, nor shall the Surety in any event be liable for more than the total amount of the bond.

3. That upon a default by the Principal of its obligations under or pursuant to said MITIGATION AGREEMENT, Paragraphs 3, 4, 5 and 7, the Obligee shall give written notice of the occurrence of such default to the Surety and after receipt of such notice the Surety shall have fifteen (15) business days to make payment of the indebtedness owed under the MITIGATION AGREEMENT, such payment not to exceed the bond amount stated above, conditioned upon the event that in the event of loss the Obligee shall be required to present a Notice of Default on such form as may be prescribed by the Surety.

4. No other person or entity, other than the Obligee, shall be granted any entitlement to the bonded sum referenced herein.

Signed and sealed this ____ day of July, 1997.

Principal

CATELLUS DEVELOPMENT CORPORATION

By: _____
Title:

Surety

(NAME OF SURETY)

By: _____
(Attorney in Fact)

Address:

(Affix Corporate Seals)
(Attach Acknowledgments of both Principal and Surety Signatures)

Retyped 10/25/99

MITIGATION AGREEMENT
BETWEEN CATELLUS DEVELOPMENT CORPORATION
AND THE CALIFORNIA DEPARTMENT OF FISH AND GAME

This Mitigation Agreement ("Agreement") is made and entered into by and between Catellus Development Corporation ("CDC") and the California Department of Fish and Game (the "Department"), collectively "the parties."

The purpose of this Agreement is to mitigate adverse impacts to the California tiger salamander (*Ambystoma californiense*), caused by the interim development of CDC's Pacific Commons project ("Interim Development") in Fremont, California. California tiger salamander (" CTS") is a Federal Candidate species and a State designated Species-of-Special-Concern.

RECITALS

A. WHEREAS, CDC proposes construct an industrial/commercial development within the 145 acre Interim Development area (Exhibit 1), the central portion of the approximately 800 acre Pacific Commons project site, located southwest of Interstate 880 between Auto Mall Parkway and Cushing Parkway, and to mitigate for impacts to CTS and CTS aestivation habitat which is known to occur throughout the Interim Development area;

B. WHEREAS, the Department is trustee for the fish and wildlife resources of the State of California and has jurisdiction over the conservation and protection of fish, wildlife, and native plants, and the habitat necessary for biologically sustainable populations thereof pursuant to California Fish and Game Code Section 1802;

C. WHEREAS, CTS are known to occur throughout the Interim Development area;

D. WHEREAS, the Interim Development project will result in permanent impacts to 82 acres of CTS aestivation habitat (Area A, Exhibit 1), and may result in impacts to up to an additional 53 acres of CTS aestivation habitat (Area B, Exhibit 1);

E. WHEREAS, the Interim Development project will result in the take of individual CTS:

F. WHEREAS, the Department desires, consistent with the policies of California Fish and Game Code Section 1802, that there is permanent protection for CTS and their habitat to assure the conservation, restoration, and long-term survival of this species; and

G. WHEREAS, CDC agrees to undertake the mitigation measures set forth in this Agreement to offset the adverse impacts to CTS caused by the Interim Development project;

NOW THEREFORE, the Parties agree as follows:

1. At least thirty (30) days before initiating ground disturbing activities, CDC shall designate a representative responsible for communications with the Department and for overseeing compliance with this Agreement and notify the Department in writing.

2. CDC shall notify the Department fourteen (14) days before initiating ground disturbing activities.

3. CDC agrees to acquire and preserve 92 acres and up to an additional 53 acres (for a total of 145 acres), of existing CTS aestivation habitat management (HM) Lands and to transfer to the Department either fee title to the HM lands or a conservation easement acceptable to the Department. The amount of HM land required will be based on whether or not only Area A, or both Area A and B, are impacted by development. The fee title of the HM land or a conservation easement may be transferred to a non-profit corporation or public entity approved by the Department under terms approved by the Department. CDC agrees to obtain the Department's approval or the HM Lands for their biological suitability prior to any transfer.

a. The required HM lands acreage amount is based upon the agreement between CDC and the Department that all 145 acres within the Interim Development area are CTS aestivation habitat, and that one acceptable method of mitigating impacts to CTS and CTS habitat is off-site preservation of existing CTS habitat at an acreage ration of 1:1. The HM lands must have existing CTS aestivation habitat throughout the site. CDC agrees to demonstrate that the HM lands are suitable for CTS mitigation by providing survey information which shows CTS distribution throughout the site(s). The total acreage of HM lands protected through this Agreement may be larger than the 92 acres required for Area A, or up to the 145 acres required for Area A plus Area B, because if there are areas on the HM lands that are not suitable for CTS aestivation or breeding, these areas will not count towards the mitigation requirement. Any HM lands protected for the purposes of this Agreement must include areas on-site where CTS can breed successfully. If aestivation habitat exists on the HM lands and breeding ponds are located off-site, CDC will be responsible for creating breeding habitat on the HM lands. CDC agrees to provide the Department a recent preliminary title report and Level I environmental report for the HM lands. All documents conveying HM lands and all conditions of title are subject to the approval of the Department, the Department of General Services and, if applicable, the Fish and Game Commission.

b. CDC agrees to acquire 92 acres of HM Lands within 18 months of CDC's execution of this Agreement. This requirement will mitigate impacts to CTS due to grading and development activities in Area A (as depicted in Exhibit 1). CDC further agrees to acquire up to 53 additional acres of HM lands within 18 months of receipt of all approvals and permits from the City of Fremont for development in Area B (as depicted in Exhibit 1). CDC shall endeavor to acquire contiguous HM lands. If portions of Area B are permanently protected, the HM land requirement for Area B shall correlate to the amount of acreage developed in that area at a ratio of 1:1. The

Parties agree that this bifurcation of the mitigation obligation is justified on the grounds that a portion of Area B may never be developed and may instead be included in a habitat preserve.

c. If CDC fails to complete the acquisition of 92 acres or HM lands within 18 months or other duties identified in this Agreement, within the time periods specified, the Department, at its option, may demand that CDC cure its breach forthwith. If, after 18 months from the date of execution of this Agreement, CDC has failed to complete the acquisition and transfer duties detailed in this Agreement for impacts in Area A or, acquisition and transfer of up to 53 additional acres for impacts in Area B, within the time period specified, the Department's remedies include, but are not limited to, drawing upon the security to complete the required acquisition of HM Lands.

4. Initial protection and enhancement measures of the HM lands may include fencing, trash clean-up, CTS breeding habitat creation, bull frog removal and/or any necessary habitat restoration. These activities shall be the responsibility of CDC. Alternatively, CDC may fund the Department's initial protection and enhancement activities on the HM Lands by providing to the Department two checks in the amount of $30,000 each, (one for Area A and one for Area B), drawn from a banking institution located within California. Any unobligated funds shall be returned to CDC upon completion of all items and conditions of this Agreement.

5. CDC agrees to provide the Department or non-profit corporation, as applicable, with two checks, one in the amount of $100,280 for Area A and one in the amount of $57,770 for Area B (145 acres multiplied by $1,090 per acre) to establish an endowment for the long-term management of the HM lands. CDC shall transfer these funds to the Department upon the Department's approval of the biological suitability, exceptions and conditions of title, and acquisition by the Department or an agent approved by the Department of HM Lands as provided herein. The funds shall be in the form of two checks drawn from a banking institution located within California. Such funding shall be used as principal for a permanent capital endowment. Interest from this amount shall be available for operations, management and protection of the HM lands acquired pursuant to this Agreement. Operation, management and protection activities may include reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action designed to protect or improve the habitat values of the HM lands. Money received by the Department pursuant to this provision shall be deposited in a special account established pursuant to Government Code Section 16370. The Department may pool the endowment with other endowments for the operation, management and protection of HM lands for local populations of the salamander.

6. CDC agrees to reimburse the Department for reasonable expenses incurred as a result of the approval and implementation of this Agreement, including costs of title and documentation review, expenses incurred from other state agency reviews and overhead. The Parties estimate that this Agreement will create an additional cost to the Department of up to $3,000 per HM lands acquisition transaction processed.

7. CDC may proceed with activities that adversely affect CTS before fully performing its duties and obligations in the Agreement if CDC secures its performance by establishing a surety bond (security) in substantially the same form as Exhibit 2, within ten business days after the date of execution of this Agreement. The security shall designate the Department as beneficiary, and shall be in an amount sufficient to fund the performance of CDC's unperformed duty or obligation, as such costs are estimated below. If CDC has not fulfilled its obligations for Area A under this agreement within 18 months of the execution of this Agreement, or has not fulfilled its obligations for Area B within the time periods specified, CDC shall pay the Department the estimated cost of performing any unperformed obligation as set forth below. In the event that CDC does not pay such a sum to the Department after 10 days' written notice of such an amount being due, the Department may draw on any security provided pursuant to this Agreement and use such funds to acquire, protect, enhance and manage HM lands. CDC agrees to secure its performance of duties outlined in this Agreement, with Security in the amount of $1,655,000, including (1) $60,000 for initial protection and enhancement of two separate HM land sites; (2) $1,450,000 (145 acres multiplied by $10,000 per acre) for the acquisition and /or preservation of habitat lands, and (3) $158,050 (145 acres multiplied by $1,090 per acre) for the preservation of such habitat lands.

8. The parties estimate that CDC's costs for the acquisition and transfer of suitable HM lands totaling 145 acres of CTS habitat will be $1,450,00 ($10,000 per acre). Notwithstanding the above estimate, in the event that acquisition costs exceed the projected amount, CDC shall not be released from performance of the duties contained herein unless the Department and CDC agree to modify this Agreement to provide for alternate effective CTS mitigation measures acceptable to the Department. In the event that acquisition costs are less than estimated, CDC's funding obligations shall be reduced to actual acquisition costs.

Upon timely request and upon presentation of documentary evidence of full compliance with the terms and the conditions of this Agreement, the Department shall effectuate cancellation of the security if such full compliance occurs prior to the natural expiration of the security. CDC desires to proceed with the Interim Development prior to the performance of acquisition and protected duties identified in this Agreement.

9. The Department, its designee or successor shall hold title to and protect all HM lands conveyed in fee title under this Agreement solely for the purposes of conservation, protection, restoration, and enhancement of CTS. This covenant shall run with the land and no use of such land shall be permitted by the Department or any subsequent title holder or assignee which is conflict with the stated conservation purposes of this Agreement. The Department, its designee or successor may allow some wetland creation and/or limited grading on the HM lands if said uses do not conflict, in any way, with the conservation goals for CTS.

10. The Department, its designee or successor shall record on each deed a statement that the HM lands described in the deed of record have been conveyed to the Department, its designee or successor for purposes of conservation, protection, restoration and enhancement of CTS. Such statement shall be substantially as provided in Exhibit 3.

11. In the event CDC defaults on any of its material obligations under this Agreement, the Department shall have all rights with respect to any security and all remedies available at law or in equity, including specific performance injunction, and without limitation all rights of a secured party pursuant to this California Uniform Commercial Code.

12. All notices and other communications required or permitted under this Agreement shall be in writing and addressed to the parties at the following addresses, or at substitute addresses subsequently provided to any of the parties:

CDC General Counsel
Catellus Development Corporation
201 Mission Street, 2nd Floor
San Francisco, CA 94105

DEPARTMENT General Counsel
Legal Affairs Division
Department of Fish and Game
1410 Ninth Street, 12th Floor
Sacramento, CA 95814
(916) 654-5295

and

Mr. Carl Wilcox
Region 3
California Department of Fish and Game
P.O. Box 47
Yountville, CA 94590
(707) 944-5525

13. Any sale or assignment of this Agreement or any of the rights or obligations thereunder is void absent the written consent of the Parties; provided, however, that no consent shall be required for assignment or pledge made by CDC (a) to any company that shall succeed BY purchase, merger or consolidation to the properties of the CDC; or (b) as security for a debt under the provision of any mortgage, deed of trust, indenture, bank credit agreement, or similar instrument.

14. This Agreement comprises the entire agreement and understanding between the Parties concerning the Interim Development project. This Agreement supersedes all prior and contemporaneous agreements, representation or understandings, whether oral or written.

15. This Agreement shall be governed by the laws of the State of California. Actual or threatened breach of this Agreement may be prohibited or restrained by a court of competent jurisdiction.

16. This Agreement is solely for the benefit of the People of the State of California, by and through the Department, or its designated representatives and CDC.

17. From time to time, the Parties shall by mutual agreement execute such instruments and other documents, and take such other actions, as may be reasonably necessary to carry out the terms of this Agreement. This Agreement cannot be amended or modified in any way except by a written instrument duly executed by the Parties. In any action requiring the agreement or approval of either of the Parties, such agreement or approval shall not be unreasonably denied or withheld.

This Agreement shall terminate three (3) years from the date of execution unless extended by operation of paragraph 3(b) of the Agreement or upon completion of all terms and conditions. In the event this Agreement terminates by law or judicial action prior to the full performance of the management duties and obligations, title to any security provided by CDC shall inure the Department operation of law on the date of the termination. The obligation to mitigate for impacts to CTS as specified in this Agreement does not terminate with the termination of the Agreement.

19. It is acknowledged that the purpose of this Agreement is to set forth the obligations and rights of the Parties hereto with respect to the Interim Development project and to provide for the conservation of CTS and the mitigation and compensatory measures required in connection with the taking of CTS in the course of otherwise lawful use of lands within Interim Development area. Accordingly, no further mitigation or compensation for the conservation of CTS will be required by the Department of CDC for impacts within the Interim Development project area identified in Exhibit 1.

20. It is further agreed that in the event that: (a) CDC completes additional CTS aestivation area surveys pursuant to Department-approved protocols, prior to any grading, and the results of such surveys show that some portions of the Interim Development project area are not CTS aestivation habitat, than there shall be a corresponding reduction to the total mitigation acreage amounts as CDC shall have no obligation to mitigate for non-CTS aestivation habitat; and (b) if CDC notifies the Department in writing that it will permanently avoid grading and development activities in specified locations and for specified acreages within the Interim Development, then for such avoided areas there shall be a corresponding reduction to the CTS aestivation habitat mitigation acreage amounts required under this Agreement.

21. Prior to the commencement of ground disturbing activities by CDC, CDC shall have the option to terminate this Agreement upon ten (10) days written notice to Mr. Brian Hunter, Regional Manager, Region 3. In the event that impacts occur and impacts are significantly less than anticipated, the Department agrees to negotiate an amendment to this agreement that would tailor the mitigation requirement to the impacts that occurred.

22. This Agreement shall be immediately effective upon execution by the Parties.

23. This Agreement includes and incorporates the following:

EXHIBIT 1, INTERIM DEVELOPMENT AREA MAP
EXHIBIT 2, SURETY BOND
EXHIBIT 3, CERTIFICATE OF PUBLIC PURPOSE

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE EXECUTED THIS AGREEMENT TO BE IN EFFECT AS OF THE DATE LAST WRITTEN BELOW:

CATELLUS DEVELOPMENT CORPORATION

By: David B. Friedman

Date: 8-8-97

Its: Vice President/President Catellus Resources Group

Mr. David Friedman
President, Catellus Resources Group

CALIFORNIA DEPARTMENT OF FISH AND GAME

By: Ken Alisen for

Date: 8-8-97

Mr. Brian Hunter
Regional Manager, Region 3

S:\10\85\4388\KAMMERER\real copy of CTS mitigation agreement.wpd

APPENDIX C

FINAL UPDATED TRAFFIC STUDY OF THE PROPOSED PACIFIC COMMONS PROJECT

TJKM TRANSPORTATION CONSULTANTS

FINAL

Updated Traffic Study Of the Proposed Pacific Commons Project

In the City of Fremont

January 24, 2000

Prepared by:
TJKM Transportation Consultants
4234 Hacienda Drive, Suite 101
Pleasanton, CA 94588-2721
Tel: 925.463.0611
Fax: 925.463.3690

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INTRODUCTION

Introduction

This report presents the results of TJKM's updated transportation analysis of the proposed Catellus Development Corporation's Pacific Commons project in the City of Fremont.

The purpose of this traffic study is to supplement the information previously presented in the Supplemental Environmental Impact Report (SEIR) for the same project. The Draft SEIR is dated May 1, 1996 and contains and incorporates a *Traffic Impact Study for the Proposed Pacific Commons Project in the City of Fremont,* dated April 16, 1996. The City of Fremont approved the Pacific Commons Project in 1996.

The current project, which is the subject of this analysis, is composed of a mix of industrial, office, service commercial and hotel uses. The current project contains the same square footage as the project approved in 1996, 8.3 million square feet. However, a wetland preserve has been designated on a portion of the previous project, so the current project is concentrated on the northern portion of the Catellus holdings. Due to the concentration of square footage in a smaller area, the current project has somewhat different land use intensities than the approved project.

Setting

Figure 1 shows the project site and vicinity. The project is bordered on the north by Auto Mall Parkway, to the east by I-880, to the south by the wetland preserve and to the west by portions of the wetland preserve and the Union Pacific Railroad right of way. The overall project area includes existing development in several auto dealerships in the Fremont Auto Mall, located south of the intersection of Cushing Parkway and Auto Mall Parkway, and in industrial areas located between the Auto Mall and Nobel Drive.

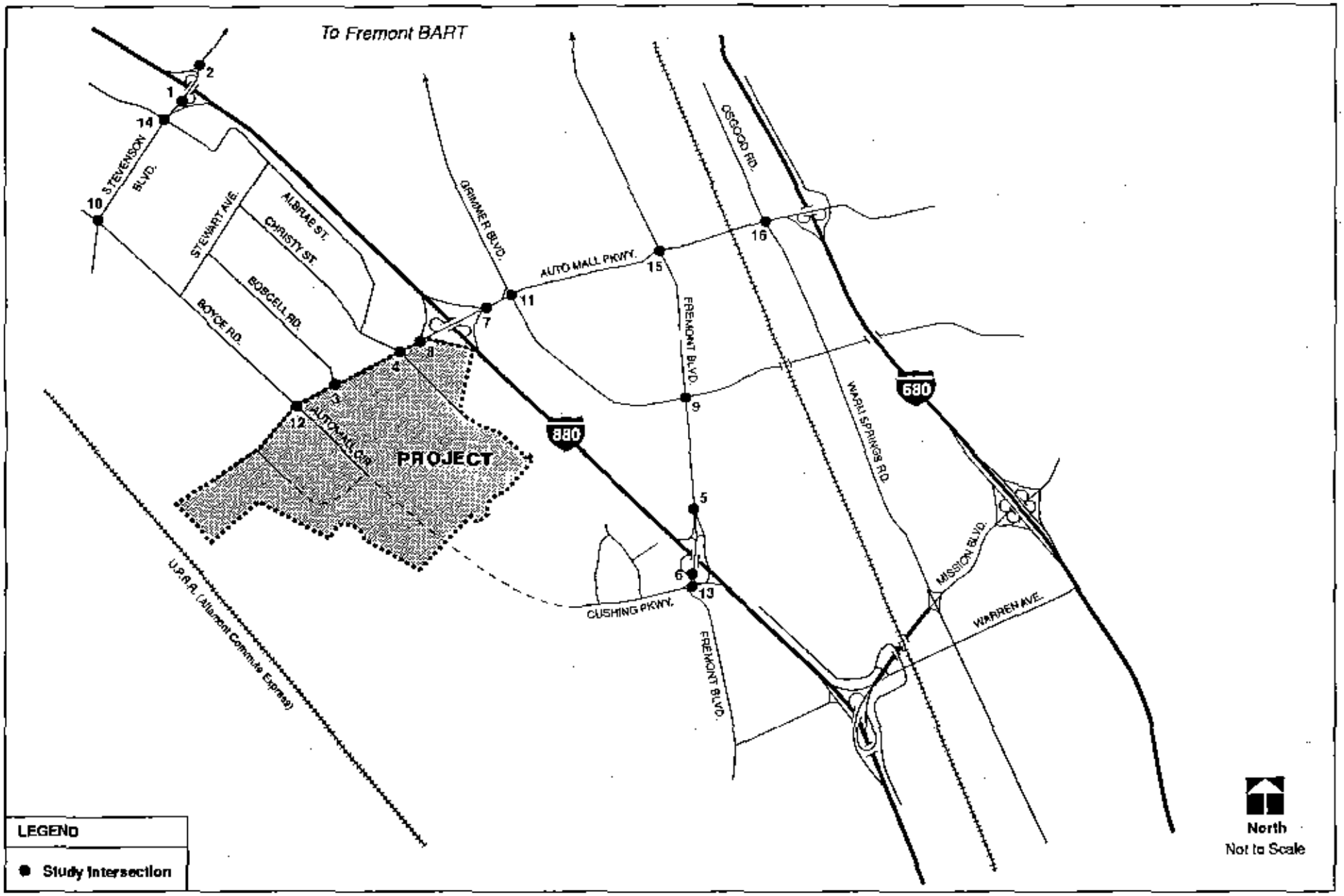
All three I-880 interchanges in the study area have been recently reconstructed, essentially to their ultimate configuration. The Stevenson Boulevard, Auto Mall Parkway and Fremont Boulevard interchanges each have six lane overcrossings and are constructed in regular or modified partial cloverleaf configurations.

Methodology

Traffic Forecasting Models

The City of Fremont uses a gravity-based citywide travel demand forecasting model to project long-range traffic conditions for key roadway segments and intersections based on land use input data in the form of dwelling units for residential development and employment projections for other land uses. The model produces forecasts for the a.m. and p.m. peak hours. This information has been utilized to develop daily forecasts on study area freeway and roadway segments.

The analysis contained in this document relies on the City's new traffic forecasting model, which uses the EMME 2 software. The City retained the firm of DKS Associates to prepare the updated traffic model and it was recently completed. The model incorporates the latest land use projections



City Of Fremont
Pacific Commons
Vicinity Map

Figure
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contained in the Fremont General Plan and adopts land use, network and other modeling conventions utilized in the Alameda County Congestion Management Agency's (ACCMA) traffic model. Therefore, the Fremont model is now fully consistent with the ACCMA traffic model and can be used to develop forecasts acceptable to that agency.

Because of the change of traffic models, the forecasts in this analysis are not directly comparable to those of the 1996 analyses. Although the new model relies on essentially the same highway and freeway network (updated to reflect any newer assumptions) as the previous model, the new model reflects more significant land use changes. The new model incorporates the regional land use forecasts prepared for the Association of Bay Area Government's *Projections '98* and also relies on more realistic land use forecasts within the City of Fremont. The new model relies on employment forecasts as an important trip-making characteristic, whereas the previous model utilized building square footage. The new model uses Year 2020 as its target year, whereas the previous model used Year 2010. Consequently, the traffic forecasts used in this analysis are assumed to be more accurate and realistic than those of used in past analyses.

Intersection Analysis

Signalized intersection performance for this analysis was measured using the Intersection Capacity Utilization (ICU) methodology. Peak hour intersection conditions are reported as volume-to-capacity (V/C) ratios with corresponding levels of service. Appendix B contains detailed descriptions of all the level of service methodology.

The level of service measurement is a qualitative description of traffic operating conditions, including expected traffic conflicts and delay. Levels of service describe these conditions in terms of such factors as speed, travel time, delays, freedom to maneuver, traffic interruptions, comfort, convenience and safety. Levels of service are given letter designations ranging from A to F. Level of Service (LOS) A indicates free-flow conditions with little or no delay and LOS F indicates congested conditions with excessive delays and long backups.

The City of Fremont has established a target intersection V/C ratio of 0.85 (corresponding to mid-range LOS D). Fremont General Plan Policy T1.2.1 indicates that the target mid-level of service D range should be maintained "...except where the achievement of such a level of service can be demonstrated to conflict with environmental, historic or aesthetic objectives or where regional traffic is a significant cause of congestion."

The City of Fremont practice has been to seek the mid-LOS D as a target level of service, but to accept a high LOS D, up to V/C 0.90. Therefore, for this analysis, an impact is considered potentially significant when during the A.M. or P.M. peak hour an intersection degrades from an acceptable operating condition (V/C 0.85 or better) under General Plan conditions to worse than 0.85 under Project conditions. Where an intersection exceeds 0.85 under General Plan conditions, a five- percent of capacity increase or .05 increase in the V/C ratio is considered significant.

The City of Fremont recently revised the capacity values it uses to calculate intersection level of service, based on actual measurements made on the Fremont street system. Previously, the City utilized values of intersection capacity obtained from published or other sources, rather than based on actual Fremont conditions. The new values, which represent more realistic definitions of intersection capacity, have been incorporated into the calculations in this updated traffic study.

Alameda County Congestion Management Agency Analysis

To comply with the usual requirements of ACCMA, future level of service analyses were performed for I-880 and I-680 in the project vicinity. Both freeways are a part of the designated roadway system of the County's Congestion Management Program (CMP). Freeway level of service is based on hourly directional freeway volumes. The ACCMA methodology designates freeway mainline capacity as 2,000 vehicles per hour per lane (vphpl) for mixed flow and auxiliary lanes.

ACCMA typically requires an analysis of the Metropolitan Transportation System (MTS) streets in the area served by the project. Near the project, streets in this category include Auto Mall Parkway between I-880 and I-680 and Fremont Boulevard between I-880 and north of Auto Mall Parkway. However, ACCMA has noted that since this project does not result in the addition of 100 or more peak hour trips above that approved in 1996, this project is exempt from CMP requirements. Nonetheless, this report does contain analyses of the freeway system, AutoMall Parkway and Fremont Boulevard.

Scenario Description

To analyze the impacts of the current proposal, TJKM compared three scenarios, described below:

Scenario 1 – Approved Project

In 1996, the City approved a project of similar to that currently proposed, but occupying both the land currently proposed for an environmental preserve as well as the currently proposed area. That project was analyzed using the then-approved City traffic model. For comparative purposes, the intersection levels of service produced by the project approved in 1996 are portrayed in this report as Scenario 1, the approved project. The reader is referred to other discussions in this report which describe differences in the traffic models and in the intersection level of service analyses used to analyze the 1996 approved project and the currently proposed project.

Scenario 2 – Fremont 2020 Base Model (ABAG Projections '98)

This scenario incorporates the Fremont base model for the year 2020, drawn from the approved General Plan land use and network for the entire City, including Catellus' Pacific Commons land. The Base Model does not represent the full build out of General Plan land uses, but represents 2020 land use as portrayed by ABAG's Projections '98. The Base Model includes development of the Catellus property with industrial-related land uses.

Principal features of the roadway network include a connection of Boyce Road and Cushing Parkway. At present the southern extension of Boyce Road serves the Fremont Auto Mall in a loop street system. That roadway would be expanded and extended southerly to connect with Cushing Parkway at its current northern terminus northwest of Northport Loop West.

Many other roadways external to the site have recently been improved. These include the I-880 interchanges at Stevenson Boulevard, Auto Mall Parkway and Fremont Boulevard. I-880 has been improved to include three mixed flow lanes and one high occupancy vehicle lane in each direction. Auto Mall Parkway along the site frontage has been improved significantly.

The roadway network and land use data used in this scenario are included in the City of Fremont's new traffic forecasting model, described above. The roadway network in this model is based on the City of Fremont General Plan and considers future roadway improvements that are expected to be completed by the year 2020. The land use data are also based on the City of Fremont General Plan. In the area occupied by the proposed Pacific Commons Project (which is expected to have approximately 25,000 employees), the City traffic model includes a development with approximately 7,000 employees, even though the proposed project is similar in size to the project approved by the City in 1996. This does provide the opportunity to use the new model to compare the impacts of the proposed project with a hypothetical and smaller project.

Scenario 3 – Proposed Project

For this scenario, the external roadway network assumptions are identical to those of Scenario 2. The developed portion of the site acreage has been reduced because of the proposed wetland preserve, so the street system within the project is also changed from the approved project. Within the project site, the project applicant has developed a new conceptual roadway network. Its principal

features include southward extension of Christy Street, Boscell Road, Cushing Parkway and Nobel Drive to serve as major on-site collectors. In addition, a central commons area is included along with several east-west collectors.

Table 1 contains the land use proposals of the current project and the project approved in 1996. Figure 2 illustrates the conceptual site plan for the proposed project.

TABLE I: APPROVED AND PROPOSED LAND USE

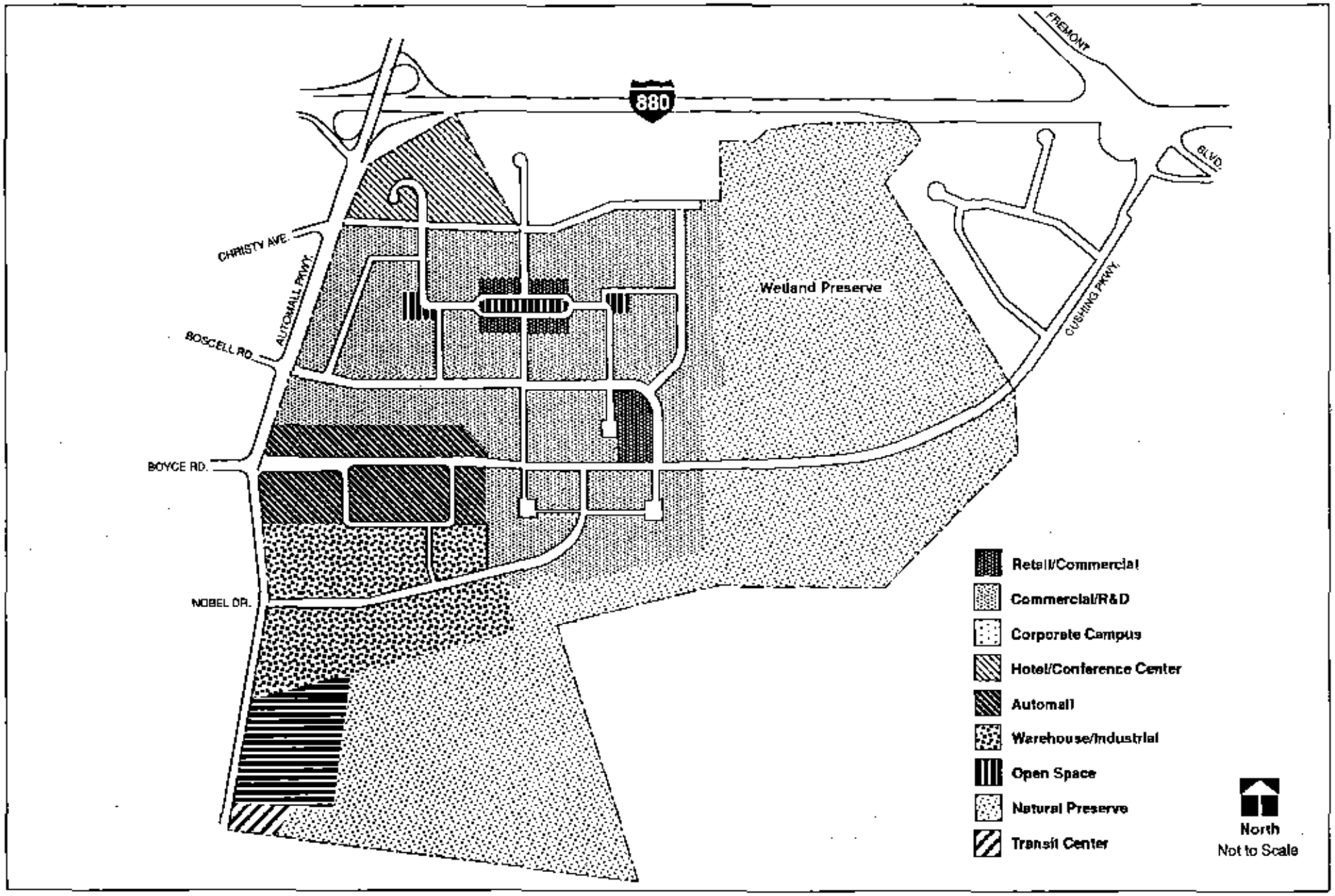
Land Use	*Approved Project, ksf*	*Proposed Project, ksf*	*Difference, ksf*
Retail/Commercial	701	330	-370
Commercia/R&D	4,640	4,910	+270
Corporate Campus	--	1,160	+1,160
Hotel/Conference Center	--	687	+687
Warehouse	1,966	1,200	-766
Office	150	--	-150
Industrial	347	--	-347
Manufacturing	515	--	-515
.....Sub-total	8,319	8,287	-32
Auto Mall	45 acres	45 acres	

As noted in Table 1, the proposed project has essentially the same amount of development as the approved project, but a different composition. The proposed project contains a hotel/conference center and less retail uses. It also contains no industrial or manufacturing uses. Some land has been designated for large corporate users, replacing smaller areas designated for office uses.

Trip Generation

Trip generation calculations were made for the existing project and the proposed project. Trip rates are based on the *San Diego Trip Generators,* a standard reference document utilized by the City of Fremont. Trip rate summaries shown in this section are based on common traffic engineering methodologies for evaluating proposed projects. However, since the proposed project is of such a large magnitude, the analysis methodology used for impact determination involved the use of the City's traffic model. The traffic model uses different procedures to generate, distribute and assign trips than are used for evaluating smaller projects. The trip generation tables are included to aid the reader in comparing the impacts of the two projects. The traffic model uses employment activity as the major trip indicator, rather than building square footage. However, the trip generation tables are thought to accurately represent the relative characteristics of the two projects.

Table II summarizes the trip generation for the project approved by the City in 1996. This table was prepared for analysis of the approved project in its 1996 traffic analysis. The approved project generates 100,270 daily trips, 8,260 a.m. peak period trips and 10,524 p.m. peak period trips. These totals include trips from the buildout of the Fremont Auto Mall, which although not a part of the proposed project, are of interest because the Auto Mall is surrounded on three sides by the proposed project.



City Of Fremont
Pacific Commons
Proposed Site Plan

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TABLE II: TRIP GENERATION – APPROVED PROJECT

Use	Size[1]		Daily Trips		A.M. Peak Hour					P.M. Peak Hour				
			Rate per Unit[2]	Total	Rate per Unit[2]	In:Out	Vehicle Trips In	Vehicle Trips Out	Vehicle Trips Total	Rate per Unit[2]	In:Out	Vehicle Trips In	Vehicle Trips Out	Vehicle Trips Total
Proposed Pacific Commons														
Warehouse[3]	1,966	ksf	4.501	8,849	0.572	70:30	788	337	1,125	0.642	16:84	202	1,060	1,262
Office	150	ksf	9.049	1,357	1.079	85:15	138	24	162	1.083	18:82	29	133	162
Industrial	347	ksf	4.033	1,399	0.649	86:14	194	31	225	0.643	18:82	40	183	223
Restaurant	21	ksf	187.925	3,946	9.627	66:34	133	69	202	9.165	43:57	83	109	192
Retail > 100 ksf	676	ksf	39.752	26,872	0.438	74:26	199	70	269	3.081	41:59	854	1,229	2,083
Retail < 100 ksf	25	ksf	65.889	1,647	1.876	69:31	32	15	47	6.658	43:57	71	95	166
R&D	4,640	ksf	9.049	41,987	1.079	85:15	4,256	751	5,007	1.083	18:82	905	4,120	5,025
Manufacturing[4]	515	ksf	4.033	2,077	0.649	86:14	287	47	334	0.643	18:82	60	271	331
Golf Course[5]	9	holes	40.00	360	3.220	83:17	24	5	29	3.360	52:48	16	14	30
Public Park[5,6]	45	acres	12.79	576	0.440	65:35	13	7	20	0.890	45:55	18	22	40
Sub-Total				89,070			6,244	1,356	7,420			2,278	7,236	9,514
Auto Mall	45	acres	–	11,200	–	–	510	330	840	–	–	400	610	1,010
TOTAL				100,270			6,574	1,686	8,260			2,678	7,846	10,524

Source: SEIR,1996

Notes:

1 Square footages are based on estimated build-out potential as supplied by the applicant.
2 City of Fremont standard rates based on *San Diego Trip Generators*, San Diego Association of Governments.
3 20 acres of the proposed warehouse use will be located on the Robbins-Stern parcels. Approximately 36 acres are to be located on the Fremont Auto mall site.
4 Manufacturing is part of the Campus use.
5 These uses to be located on the Robbins-Stern parcels.
6 The park is located on the Robbins-Stern parcels. Smaller parks and plazas within the Pacific commons project site will be primarily for internal use on weekends and public use during the weekends. Therefore, they will not generate any new external weekday peak hour trips.

TABLE III: TRIP GENERATION – PROPOSED PROJECT

Use	Size[1]		Daily Trips		A.M. PeakHour					P.M. Peak Hour				
			Rate per Unit[2]	Total	Rate per Unit[2]	In:Out	Vehicle Trip Ends			Rate per Unit[2]	In:Out	Vehicle Trip Ends		
							In	Out	Total			In	Out	Total
Retail/Commercial	330	ksf	39.752	13,118	0.438	74:26	107	38	145	3.081	41:59	417	600	1,017
Commercial/R&D	4,910	ksf	9.049	44,431	1.079	85:15	4,503	795	5,298	1.083	18:82	957	4,361	5,318
Corporate Campus	1,160	ksf	9.049	10,497	1.079	85:15	1,064	188	1,252	1.083	18:82	226	1,030	1,256
Hotel/Conference Center	687 (24 acres)	ksf	300.00	7,200	18.0	60:40	260	172	432	24.0	60:40	346	230	576
Warehouse/Industrial	1,200	ksf	4.501	5,407	0.572	70:30	480	206	686	0.642	16:84	123	647	770
Public Park	29	acres	12.79	370	0.440	65:35	8	5	13	0.890	45:55	12	14	26
SUBTOTAL				81,017			6,422	1,404	7,826			2,081	6,882	8,963
Auto Mall	45	acres	—	11,200	—	—	510	330	840	—	—	400	610	1,010
TOTAL				92,217			6,932	1,734	8,666			2,481	7,492	9,973

Source: TJKM

Notes:

[1] Square footages are based on estimated build-out potential as supplied by the applicant.
[2] City of Fremont standard rates based on *San Diego Trip Generators*, San Diego Association of Governments.

Table III summarizes the trip generation for the proposed project. Trip generation for the proposed project is similar to that of the approved project. The new project generates 92,217 daily trips, 8,666 a.m. peak period trips and 9,973 p.m. peak period trips. The newer project generates less traffic on a daily basis and in the evening peak hour because it has a significant reduction in retail uses.

Trip Assignment

Project trips were assigned to the City of Fremont roadway network using the City traffic forecasting model. Table IV contains a comparison of the projected 2020 peak hour traffic volumes on key roadway segments for the two current study scenarios, 2 and 3. This table also indicates the amount of traffic that the proposed project contributes to the various roadway segments in the p.m. peak hour, including the calculated percentage of the total traffic. Figure 3 illustrates 2020 p.m. traffic volumes on proposed streets in the area and project percent contributions.

Impacts

Intersections

Although all study intersections currently exist, the project will create a new south leg at Auto Mall Parkway and Boscell Road. Several other intersections are assumed to be reconfigured under 2020 conditions. Table V summarizes the results of the intersection analyses for the two study scenarios. It also includes the results of the scenario describing the Approved Project from the 1996 SEIR. Detailed calculations are shown in Appendix C. The following description summarizes the level of service findings at the 16 study intersections under the three scenarios depicted in Table V:

1. *I-880 SB Off-ramp/Stevenson:* In the two current study scenarios, this intersection operates at satisfactory levels.

2. *I-880 NB Off-ramp/Stevenson:* This intersection operates at satisfactory levels in all scenarios.

3. *Boscell Road/Auto Mall Parkway:* This intersection operates at satisfactory levels in all scenarios.

4. *Christy Street/Auto Mall Parkway:* This intersection operates at satisfactory levels in all scenarios.

5. *I-880 NB Off-Ramp/Fremont:* In the two current study scenarios, the intersection operates at satisfactory levels.

6. *I-880 SB Off-Ramp/Fremont:* This intersection operates at satisfactory levels in all scenarios.

7. *I-880 NB Off-Ramp/Auto Mall Parkway:* This intersection operates at satisfactory levels in all scenarios.

8. *I-880 SB Off-Ramp/Auto Mall Parkway:* In the approved project, the intersection was projected to operate at LOS F during the a.m. period, resulting in an unavoidable significant impact. The City adopted findings of overriding circumstances for the intersection. In the proposed project scenario, there is a LOS E (0.92) in the a.m. period and above mid-point LOS D (0.89) in the p.m. period.

9. *Fremont/S. Grimmer:* This intersection operates at satisfactory levels in all scenarios.

TABLE IV: COMPARISON OF 2020 TWO-WAY PEAK HOUR TRAFFIC VOLUMES

Street	Location	Base Model Scenario 2		Proposed Project Scenario 3			
		Total Peak Hour Volumes		Total Peak Hour Volumes		Project Volumes Only PM Peak	Project Volumes % of Total PM Peak
		AM	PM	AM	PM		
Stevenson Boulevard	West of Albrae	2092	2521	2333	2797	33	1.2
Boyce Road	South of Stevenson	2112	3190	2396	3387	469	13.8
	North of AutoMall	2200	3341	2467	3476	557	16.0
Cushing Parkway	South of AutoMall	1341	2251	1856	2609	525	20.1
	South of Nobel	1384	2357	2032	2830	1126	39.8
	North of Fremont	1672	2797	2773	3677	1102	30.0
AutoMall Parkway	West of Christy	2253	2791	3019	3744	2283	61.0
	East of Christy	3109	4022	4888	5879	3796	64.6
	West of Grimmer	3753	4941	4194	5143	1180	22.9
	East of Grimmer	1716	2202	1919	2212	508	23.0
	West of Osgood	3707	4163	3683	4199	492	11.7
	East of Osgood	4145	3960	4229	4011	435	10.8
Grimmer Blvd.	North of AutoMall	2833	3569	3151	3770	587	15.6
	South of AutoMall	1902	2391	1901	2484	86	3.5
Fremont Blvd.	South of AutoMall	2174	2610	2062	2672	42	1.6
	North of I-880	3026	3352	3258	3670	179	4.9
	South of Cushing	1957	2409	2542	2917	41	1.4
I-880	Stevenson to AutoMall	11320	12293	11659	12498	1987	15.9
	AutoMall to Fremont	10226	10916	10353	11018	625	5.7
	Fremont to Mission	11835	12356	11934	12356	943	7.6
I-680	Washington to AutoMall	9478	10769	9538	10805	190	1.8
	AutoMall to Mission (S)	9745	12142	9675	11964	43	0.4

Source: TJKM, Fremont Traffic Models

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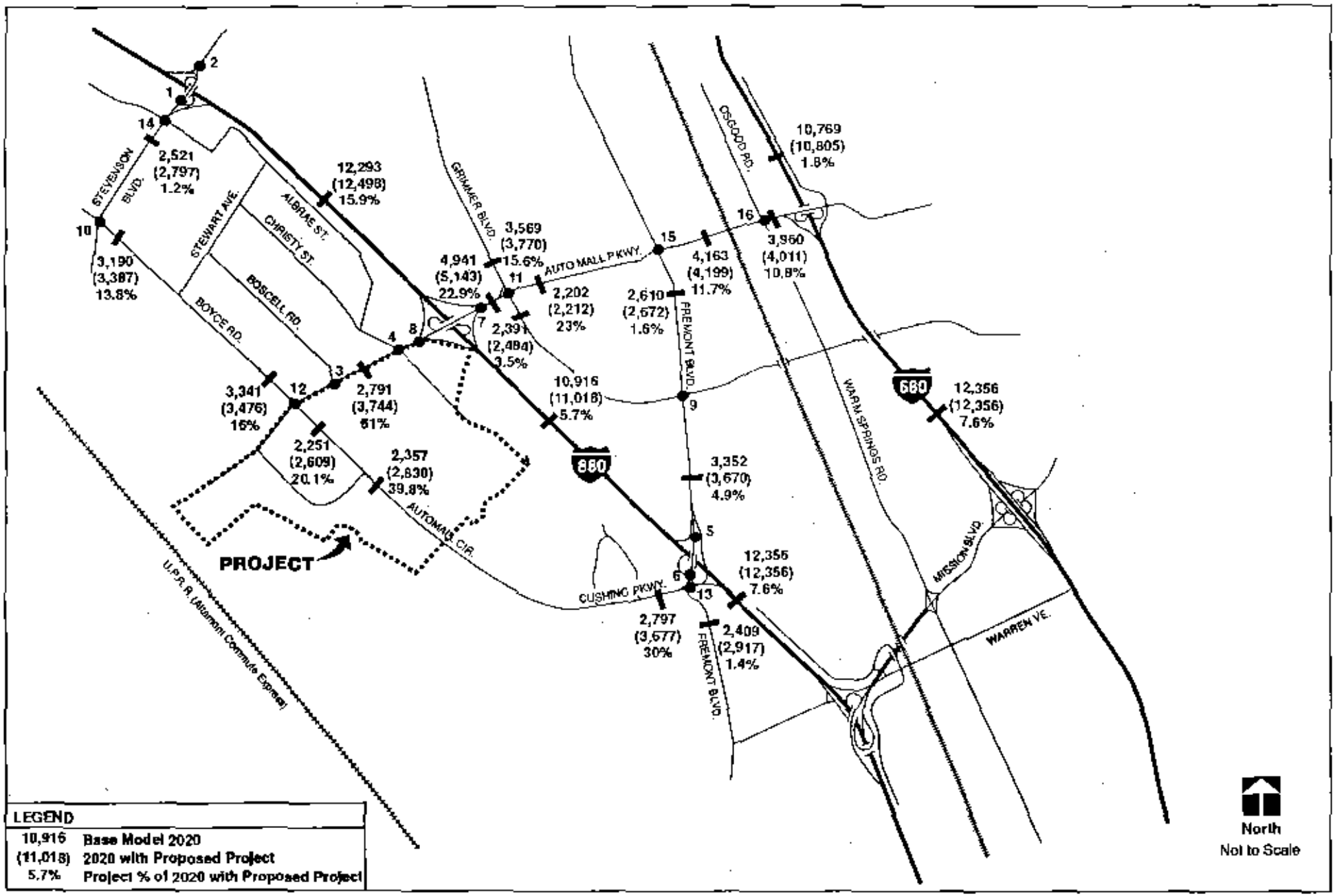

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P.M. Peak Hour Volumes

Figure
3

TJKM

TABLE V: RESULTS OF INTERSECTION LEVEL OF SERVICE ANALYSIS – 2020 CONDITIONS

ID	Intersection	AM Peak Hour						PM Peak Hour					
		Catellus EIR 2010[1]		Base Model 2020[2]		Project 2020[3]		Catellus EIR 2010		Base Model 2020		Project 2020	
		V/C	LOS	V/C[4]	LOS	V/C[4]	LOS	V/C[4]	LOS	V/C[4]	LOS	V/C[4]	LOS
1	I-880 SB Off-ramp/Stevenson	0.94	E	0.53	A	0.56	A	0.89	D	0.68	B	0.71	C
2	I-880 NB Off-ramp/Stevenson	0.67	B	0.51	A	0.55	A	0.81	D	0.62	B	0.67	B
3	Boscell Rd./Auto Mall Pkwy	0.66	B	0.58	A	0.66	B	0.81	D	0.63	B	0.77	C
4	Chrisly St./Auto Mall Pkwy	0.69	B	0.41	A	0.68	B	0.87	D	0.40	A	0.82	D
5	I-880 NB Off-ramp/Fremont	0.92	E	0.60	A	0.74	C	0.42	A	0.50	A	0.64	B
6	I-880 SB Off-ramp/Fremont	0.82	D	0.51	A	0.66	B	0.52	A	0.48	A	0.61	B
7	I-880 NB Off-ramp/Auto Mall Pw	0.82	D	0.54	A	0.70	B	0.64	B	0.69	B	0.81	D
8	I-880 SB Off-ramp/Auto Mall Pw	1.25	F	0.80	C	0.92	E	0.83	D	0.67	B	0.89	D
9	Fremont Bl./ S. Grimmer	0.76	C	0.78	C	0.83	D	0.66	B	0.64	B	0.69	B
10	Cherry/Boyce/Stevenson	0.84	D	0.79	C	0.88	D	0.85	D	0.66	B	0.78	C
11	Grimmer Bl./Auto Mall Pkwy	1.13	F	0.77	C	0.95	E	1.34	F	0.93	E	0.96	E
12	Boyce Rd./Auto Mall Pkwy	0.84	D	0.62	B	0.72	C	0.84	D	0.76	C	0.84	D
13	Fremont Bl. /Cushing Pkwy	0.81	D	0.53	A	0.70	B	0.89	D	0.55	A	0.67	B
14	Albrae/Balentine/Stevenson	0.77	C	0.48	A	0.55	A	0.99	E	0.76	C	0.79	C
15	Fremont/Auto Mall Pkwy	NA	NA	0.75	C	0.87	D	NA	NA	0.83	D	0.90	D
16	Osgood/Auto Mall Pkwy	NA	NA	0.91	E	1.07	F	NA	NA	0.91	E	1.01	F
16M	Osgood/Auto Mall Parkway Mitigated	NA	NA	0.88	D	0.96	E	NA	NA	0.89	D	0.91	E

Notes:

1. Catellus EIR 2010 = Approved 1996 project from FSEIR, land use for ABAG Projections '89. Approximately 20,000 Catellus jobs.
2. Base Model 2020 = CMA Approved 2020 Model, No Project (but includes 7,000 jobs in Catellus holdings) Land Use from ABAG Projections '98.
3. Project = CMA Approved 2020 Model, 25,000 Catellus jobs, Land Use from ABAG Projections '98.
4. Lane capacities of 1900 used for 2020 analysis; 1750 used for 2010 EIR analysis. (Based on actual field measurements)
5. NA = Intersection not evaluated in 1996 EIR.

10. *Cherry/Boyce/Stevenson:* This intersection operates above mid-point LOS D (0.88) in the a.m. period. In the approved project, the intersection was mitigated to 0.84 and 0.85 levels. However, the applied mitigation measure, a third southbound lane, was later determined to be unacceptable to the City of Newark. That mitigation measure is not applied in the two study scenarios. The impacts now are potentially significant.

11. *Grimmer/Auto Mall Parkway:* In the approved project scenario, the intersection operated at LOS F; the City adopted findings of overriding circumstances. In the Base model scenario and in the project scenario, the intersection operates at LOS E.

12. *Boyce/Auto Mall Parkway:* The intersection operates at satisfactory levels in all scenarios.

13. *Fremont/Cushing:* In the approved project, the intersection operated above mid-LOS D conditions (0.89). In the current study scenarios, the intersection operates satisfactorily.

14. *Albrae/Balentine/Stevenson:* In the approved project, the intersection operated at LOS E (0.99) conditions. In the current study scenarios, the intersection operates at satisfactory levels.

15. *Fremont/Auto Mall Parkway:* This intersection was not evaluated in the EIR for the approved project. Under proposed project conditions, it operates above mid-LOS D in both the a.m. (0.87) and p.m. (0.90) periods. It is a potentially significant impact.

16. *Osgood/Auto Mall Parkway:* This intersection was not evaluated in the EIR for the approved project. In the City's General Plan, this intersection is expected to operate at LOS E; the City adopted findings of overriding circumstances. The project is at LOS E under the 2020 Base Model and LOS F under the proposed project scenario. However, the intersection can be mitigated to LOS E so that it will be consistent with the findings of the General Plan.

The descriptions contained in the preceding section are summarized in Table VI.

Freeways

The City of Fremont Traffic Model can now be used to perform the ACCMA analysis of 2020 freeway conditions. This is because the Fremont model uses the network and the land use information that is consistent with the ACCMA model. In a letter from ACCMA, the City of Fremont was advised that a formal CMA analysis is not required. (See Appendix D.) However, the following freeway analysis is included for the information of the reader.

In this analysis, TJKM compared the peak hour directional forecast model results with the capacities on the facilities in question. Capacities were calculated on the basis of 2,000 vehicles per hour per lane for mixed flow lanes and 1,500 vehicles per hour per lane for auxiliary lanes. The Alameda County Congestion Management Plan has adopted LOS E as the standard for those roadways evaluated in this report. Since HOV volumes are not included in the analysis, the capacity from HOV lanes are also excluded. Therefore, on a freeway that has three mixed flow lanes and one HOV lane in each direction, the directional capacity is reported as 6,000 vehicles per hour, or three lanes times 2,000 vehicles per lane.

TABLE VI: SUMMARY OF INTERSECTION MITIGATION REQUIREMENTS FOR PROPOSED PROJECT SCENARIO

Intersection	*Mitigation Category*
1. I-880 SB Off-ramp/Stevenson	1
2. I-880 NB Off-ramp/Stevenson	1
3. Boscell Road/Auto Mall Parkway	2
4. Christy Street/Auto Mall Parkway	2
5. I-880 NB Off-ramp/Fremont	1
6. I-880 SB Off-ramp/Fremont	1
7. I-880 NB Off-ramp/Auto Mall Parkway	1
8. I-880 SB Off-ramp/Auto Mall Parkway	5
9. Fremont/S. Grimmer	1
10. Cherry/Boyce Stevenson	4
11. Grimmer/Auto Mall Parkway	5
12. Boyce/Auto Mall Parkway	2
13. Fremont/Cushing	1
14. Albrae/Balentine/Stevenson	1
15. Fremont/Auto Mall Parkway	3
16. Osgood/Auto Mall Parkway	6

Intersection Mitigation Category:

1 – Operates at satisfactory levels with existing lanes
2 – Operates at satisfactory levels with project planned lane additions.
3 – Operates at satisfactory levels with lane additions planned by Fremont.
4 – Operates at satisfactory levels with lane additions planned by Newark.
5 – Operates at LOS E, but Fremont adopted findings of overriding circumstances for LOS F conditions in 1996 SEIR.
6 – Operates at LOS E with combination of Fremont and project planned lane additions; Fremont previously adopted findings of overriding circumstances for LOS E in current General Plan.

Table VII indicates the results of the freeway analysis. In general, on most freeway sections, in the peak commute direction the freeway is expected to operate at either LOS E or F conditions in 2020, with or without the project. In all but two cases, the project either results in similar, slightly improved, or insignificantly degraded operating conditions.

On I-880, in the southbound direction in the a.m. period, the project causes the volume to capacity ratio to be increased from 1.05 to 1.12, which is a 6.6 percent increase in v/c. This is considered to be a potentially significant impact. Also in the a.m. period in the southbound direction, I-880 between Mowry and Stevenson increases from 1.01 to 1.04, both LOS F, but this 3.0 percent increase in v/c is considered to be an insignificant impact.

On I-680, there are four cases in which LOS F is involved. On northbound I-680 in the p.m. period, between Mission (N) and Washington, the roadway operates at 1.01 with or without the project. This is considered to be an insignificant impact. In the southbound direction of this same section, the ratio increases from 1.04 to 1.06 in the a.m. period due to project traffic. This is considered to be an insignificant impact. Between Washington and Auto Mall in the p.m. period in the northbound direction, the project-related increase from 1.04 to 1.06 is considered to be insignificant. In the a.m. period in the southbound direction, the project raises the ratio from 0.99 to 1.01. Although this is only a two percent increase, it is considered potentially significant because the LOS elevates from E to F.

It is not practical for the project to widen the freeway to mitigate potentially significant impacts. However, as noted in the mitigation section of this report, the City should require the developer to implement an aggressive Transportation Demand Management strategy to reduce the level of single occupant vehicles on the street system during peak hours.

TABLE VII: 2020 FREEWAY ANALYSIS, PEAK HOURS

Segment	Lanes	Dir.	AM Peak Hour						PM Peak Hour					
			2020 Base Model			Project			2020 Base Model			Project		
			Volume	v/c	LOS	Volume	v/c	LOS	Volume	v/c	LOS	Volume	v/c	LOS
I-880														
Mowry to Stevenson	3 + Aux.	NB	5189	0.69	B	5107	0.68	B	6581	0.88	D	6734	0.90	D
	3	SB	6060	1.01	F	6226	1.04	F	5703	0.95	E	5756	0.96	E
Stevenson to AutoMall	3	NB	4993	0.83	D	4936	0.82	D	6427	1.07	F	6629	1.10	F
	3	SB	6327	1.05	F	6723	1.12	F	5866	0.98	E	5869	0.98	E
AutoMall to Fremont	3	NB	4757	0.79	C	4748	0.79	C	5704	0.95	E	5590	0.93	E
	3	SB	5469	0.91	E	5605	0.93	E	5212	0.87	D	5428	0.90	D
Fremont to Mission	3 + Aux.	NB	5550	0.74	C	5611	0.75	C	5901	0.79	C	5678	0.76	C
	3 + Aux.	SB	6285	0.84	D	6323	0.84	D	6455	0.86	D	6678	0.89	D
I-680														
Mission (N) to Washington	3	NB	3252	0.54	A	3203	0.53	A	6060	1.01	F	6055	1.01	F
	3	SB	6233	1.04	F	6337	1.06	F	4544	0.76	C	4588	0.76	C
Washington to AutoMall	3	NB	3510	0.59	A	3463	0.58	A	6068	1.01	F	6124	1.02	F
	3	SB	5908	0.99	E	6075	1.01	F	4701	0.78	C	4681	0.78	C
AutoMall to Mission (S)	3 + Aux.	NB	3962	0.52	A	3837	0.51	A	6926	0.92	E	6862	0.91	E
	3 + Aux.	SB	5819	0.78	C	5828	0.78	C	5216	0.70	B	51025	0.68	B

Source: TJKM

Assumptions:

1. HOV lane volumes not included in this table.
2. Through lane capacity is 2000 vehicles per hour per lane.
3. Auxiliary lane capacity is 1500 vehicles per hour per lane.

Internal Roadways

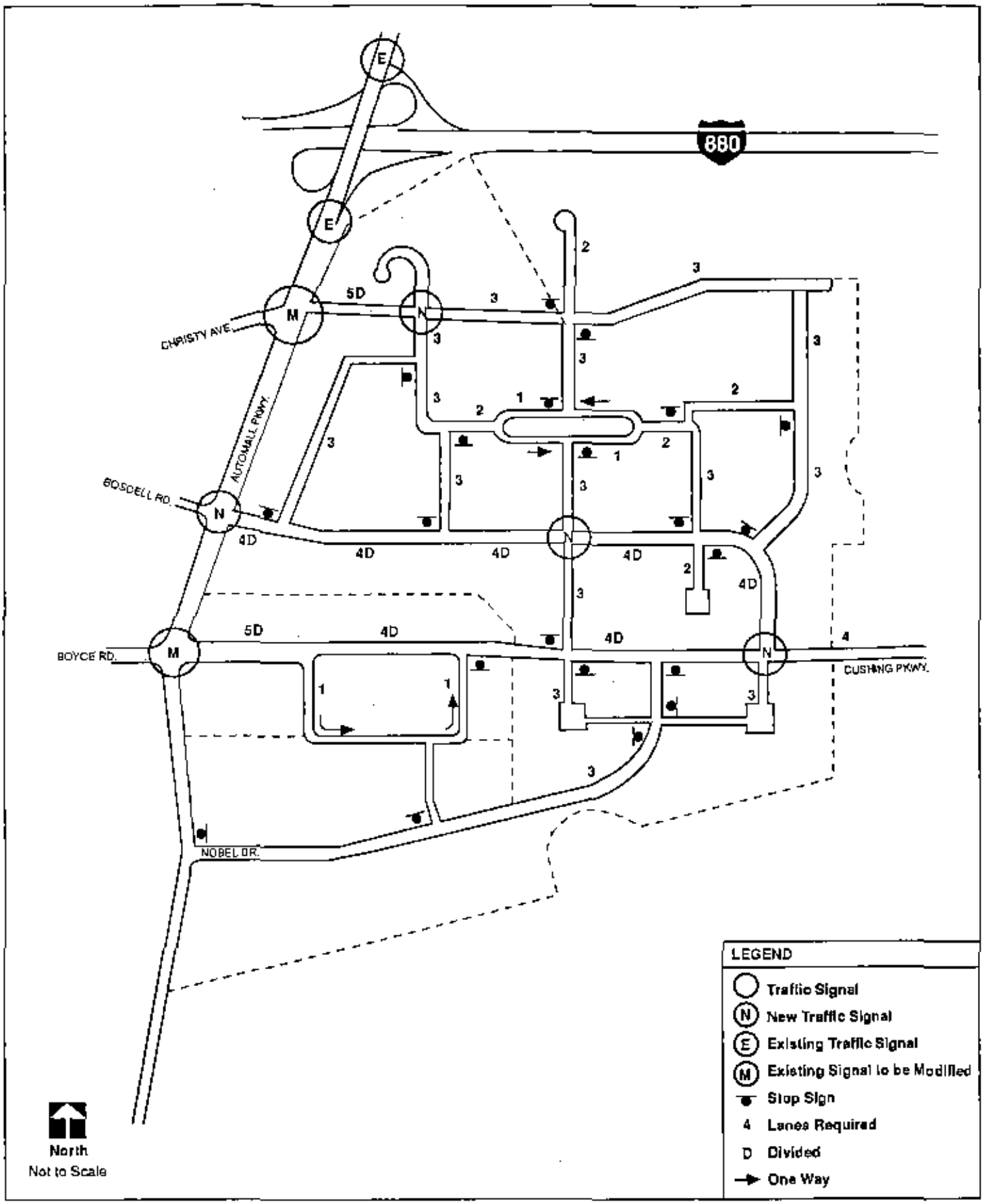
Figure 4 illustrates the street system of the proposed project. This figure indicates two sets of recommendations – Intersection traffic control devices and lane requirements.

Intersection Traffic Control Devices

The proposed traffic control devices are shown. Near the project, traffic signals exist or are needed at five locations along Auto Mall Parkway. This includes at the I-880 northbound and southbound ramp intersections, at Christy, at Boscell, and at Boyce/Cushing Parkway. Internally, it appears that traffic signals will be desirable at least three intersections. These are locations along through streets that experience high volumes of cross traffic and/or turning traffic. The through streets shown in addition to Auto Mall Parkway are Christy, Boscell, Boyce and Nobel. All intersections approaching these through street are equipped with stop signs. Also, one- and two-way stop signs are suggested at all other intersections for safety purposes and to assign the right of way.

Lane Requirements

As noted, the major streets in the development are predominately north-south streets. These are the streets that will have four lane requirements. The three major streets approaching Auto Mall Parkway are recommended to have at least five lanes, three approaching the intersection and two departing. Most four and five lane streets will need a median to accommodate left turn lanes. Most other streets have a three-lane cross-section, with the third lane being a center turn lane. The central commons area, which is intended to have a high amount of pedestrian traffic and low speed vehicle travel, is shown to be a one-way couplet with only one lane (plus perhaps on-street parking) in each direction. The three lane east-west streets are somewhat conceptual in that not all of them are required to provide adequate project access. Some of these streets can be relocated and in some cases, removed, without harming project circulation. More detailed design and traffic studies will be required before these lane requirements can be finalized



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Potential Traffic Control and Lane Requirements

Figure
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Intersection Improvements

Based on expected 2020 conditions identified in the Proposed Project scenario, improvements to intersections are described in the following section. Table VIII also includes a description of the mitigation measures. The table includes existing lane patterns at the sixteen study intersections, those which are planned by the City as a part of its Traffic Impact Fee (TIF) program, and project mitigation measures. The listing below only includes those intersections requiring mitigation.

3. *Boscell Road/Auto Mall Parkway:* This intersection will require the following lane patterns: Westbound – two left turn lanes, two through lanes and one shared through and right turn lane. Eastbound – one left turn lane, two through lanes, one shared through and right turn lane. Northbound – one left turn lane, one through lane, one free right turn lane. Southbound – One left turn lane, one shared through plus right turn lane. These are expected to be project improvements.

4. *Christy Street/Auto Mall Parkway:* This intersection will require the following lane patterns: Westbound – two left turn lanes, three through lanes, one right turn lane. Eastbound – One left turn lane, three through lanes, one right turn lane. Northbound – One left turn lane, one through lane and one free right turn lane. Southbound – Two left turn lanes, one shared through and right turn lane. These are expected to be project improvements.

10. *Cherry/Boyce/Stevenson:* Although no lane additions are needed for this intersection, the intersection will eventually need to be signalized. The level of service and the intersection operations would be significantly improved if the westbound approach were restriped for two left turn lanes, one through lane, and one right turn lane. This would mitigate the potentially significant impacts at the intersection.

11. *Grimmer/Auto Mall Parkway:* This intersection has been constructed to its maximum practical capacity. The intersection is projected to operate at LOS E with the buildout of the Catellus project. No additional mitigation measures are feasible at this intersection.

12. *Boyce/Auto Mall Parkway:* This intersection will require the following lane patterns: Northbound – one left turn lane, two through lanes, one free right turn lane. Southbound – two left turn lanes, two through lanes, one right turn lane. Westbound – two left turn lanes, two through lanes, one right turn lane. Eastbound – One left turn lane, two through lanes, one right turn lane. These are expected to be project improvements.

15. *Fremont/Auto Mall Parkway:* The following lane patterns are required at this intersection: Northbound – Two left turn lanes, two through lanes and one right turn lane. Southbound – two left turn lanes, two through lanes and one right turn lane. Westbound – Two left turn lanes, two through lanes and one shared through and right turn lane. Eastbound – Two left turn lanes, three through lanes, one right turn lane. This will allow the intersection to operate at a high LOS D (0.90 volume to capacity ratio).

16.Osgood/Auto Mall Parkway: The following lane patterns are required at this intersection: Northbound – One left turn lane, three through lanes and one right turn lane. Southbound – Two left turn lanes, two through lanes and one shared through plus right turn lane. Eastbound – Two left turn lanes, two through lanes and one shared through plus right turn lane. Westbound – Two left turn

TABLE VIII: EXISTING AND MITIGATION LANE REQUIREMENTS

Intersection	Mitigation[2]	NB			EB			SB			WB		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
1. I-880 SB Off-ramp/Stevenson		0	0	0	0	3	1	2	0	2	0	3	1
2. I-880 NB Off-ramp/Stevenson		2	0	2	0	3	1	0	0	0	0	0	0
3. Boscell Rd./Auto Mall Pkwy		0	0	0	1	3	0	1S	1S	1S	0	2	1
	Project	**1**	1	**1F**	1	**3S**	**1S**	1	1S	1S	**2**	**3S**	**1S**
4. Christy St./Auto Mall Pkwy		0	1S	1S	1	4	1	2	1S	1S	1	3	1
	Project	**1**	1	**2**	1	**4**	**1S**	2	1S	**1S**	**2**	3	1
5. I-880 NB Off-ramp/Fremont		0	2	1	0	0	0	0	3	**1**	**2**	0	1F
6. I-880 SB Off-ramp/Fremont		0	0	0	0	3	0	2	0	2	0	3	1
7. I-880 NB Off-ramp/Auto Mall Pw		2S	0	2S	0	3	1	0	0	0	0	3	1
8. I-880 SB Off-ramp/Auto Mall Pw		0	0	0	0	4	1	2	0	2	0	3	1
9. Fremont Bl./ S. Grimmer		2	2	1	1	2	1	1	2	1	1	2	1
10. Cherry/Boyce/Stevenson (unsignalized)		1	2	1	1S	2S	1F	1	2	1	1	1	1F
(signalized)	Newark	**1**	2	**1F**	1	2	1F	**2**	2	1	1	**2**	1F
11. Grimmer Bl./Auto Mall Pkwy		2	2	1	2	3	1	2	3	1F	1	3	1
12. Boyce Rd./Auto Mall Pkwy		1	1	1	2	2	1	2	1	2	2	2	1
	Project	1	**2**	**1F**	2	2	1	2	2	**1**	2	2	1
13. Fremont Bl. /Cushing Pkwy		2	4	1	2	2	1	0	3	1	1	2	1
14. Albrae/Balentine/Stevenson		1S	1S	2	1	3S	1S	3S	1S	1	2	3	**1**
15. Fremont/Auto Mall Pkwy		1	2	1	1	2	1	1	2	1	2	3S	1S
	TIF	**2**	2	1	**2**	**3**	**1**	**2**	2	1	2	3S	1S
16. Osgood/Auto Mall Pkwy		1	2	1	1	**2**	**1**	2	2	1	1	2S	1S
	TIF	1	**3**	1	**1**	**3S**	**1S**	2	**3S**	**1S**	**2**	2S	1S
	Project	1	3	1	**2**	3S	1S	2	3S	**1S**	**2**	2S	1S

Source: TJKM

Notes:
1) Bold boxes are mitigation requirements, others are existing
2) Project = Catellus responsibility
Newark = Newark developer
TIF = Fremont TIF responsibility
3) S = Shared lane
4) F = Free right turn lane

lanes, one through lane and one shared through plus right turn lane. With these lane patterns, the intersection will operate at LOS E, which is consistent with the findings of the Fremont General Plan. These are illustrated in Figure 5.

Interior Street Improvements

As described in Figure 4, traffic signals are indicated at three interior intersections. Lane patterns and other intersections traffic control recommendations are also illustrated on Figure 4.

Auto Mall Parkway Improvements

Auto Mall Parkway along the project frontage should have the following through lane patterns:

I-880 Southbound Off-Ramps to Christy: Four westbound lanes, four eastbound lanes. One eastbound lane will go directly to the southbound on-ramp. One westbound lane will go directly to a right turn lane at Christy.

Christy to Boscell: Three westbound lanes, four eastbound lanes. One eastbound lane will go directly to a right turn lane at Christy.

Boscell to Boyce: Three westbound lanes, three eastbound lanes. One westbound lane will go directly to a right turn lane at Boyce.

Nobel to Boyce: Two westbound lanes, two eastbound lanes.

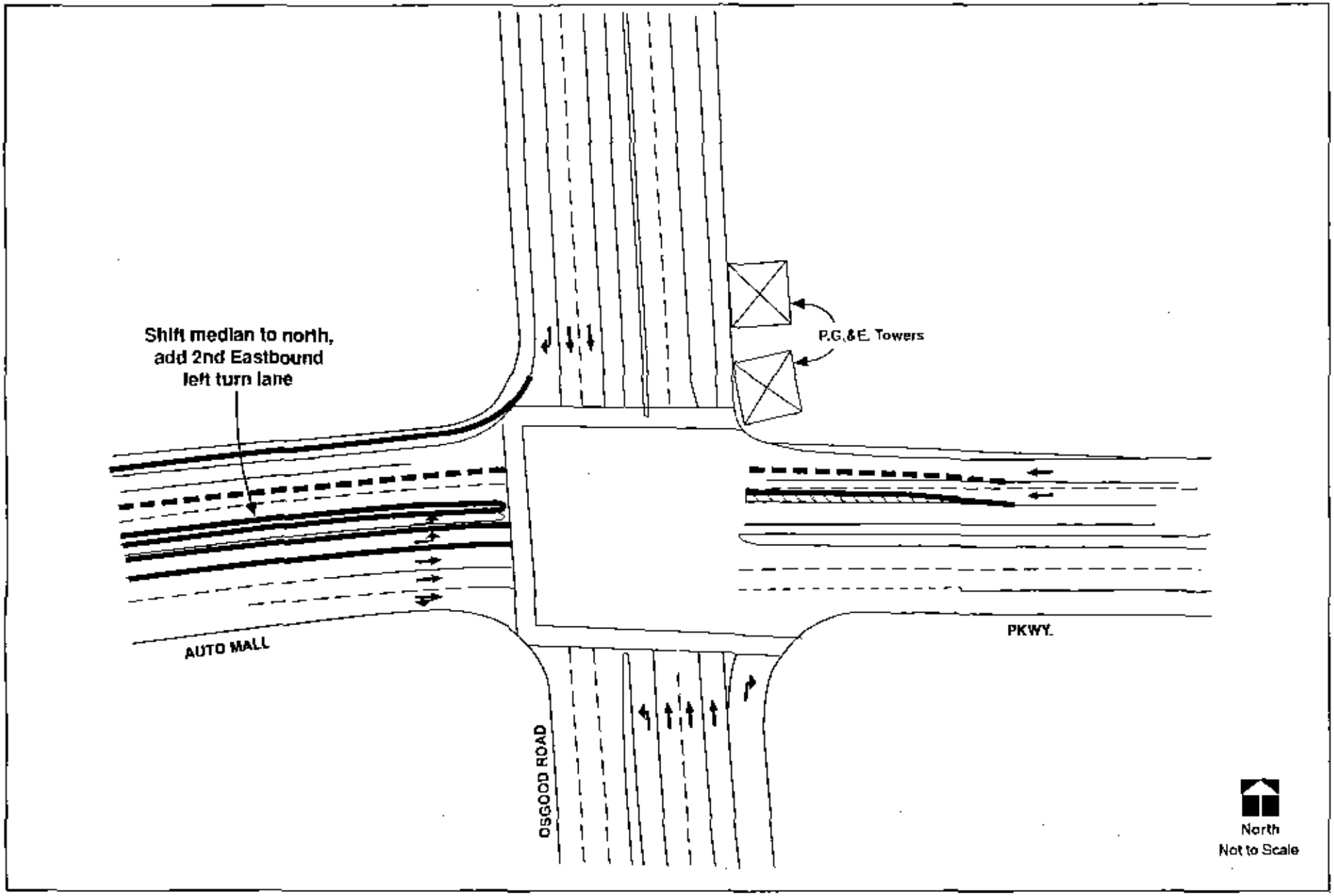
This information is illustrated in Figures 6 and 7.

Transportation Demand Management

A project with the magnitude of Pacific Commons has opportunities to develop trip reduction measures and to promote alternative commute modes of travel. Items that should be considered in such a program include transit usage, ride-sharing, flexible work hours, telecommuting, bicycling to work, preferential parking, and related issues.

The Altamont Commute Express (ACE) is planning to accommodate a station on Auto Mall Parkway adjacent to the site. ACE has noted that such a station must be approved by its Board and must be funded by others. This will accommodate residents from the San Joaquin Valley and from the Tri-Valley area who are employed in Pacific Commons. In addition, shuttle service to the existing Fremont BART station and convenient AC Transit lines also have the potential to remove commuters from private autos.

A draft *Transportation Demand Management Program for Catellus Development Company*, dated March 29, 1999 has been prepared and is included as Appendix A. This program forms the initial elements of a comprehensive TDM program.



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Mitigation Requirement – Auto Mall Parkway/Osgood Road

Figure
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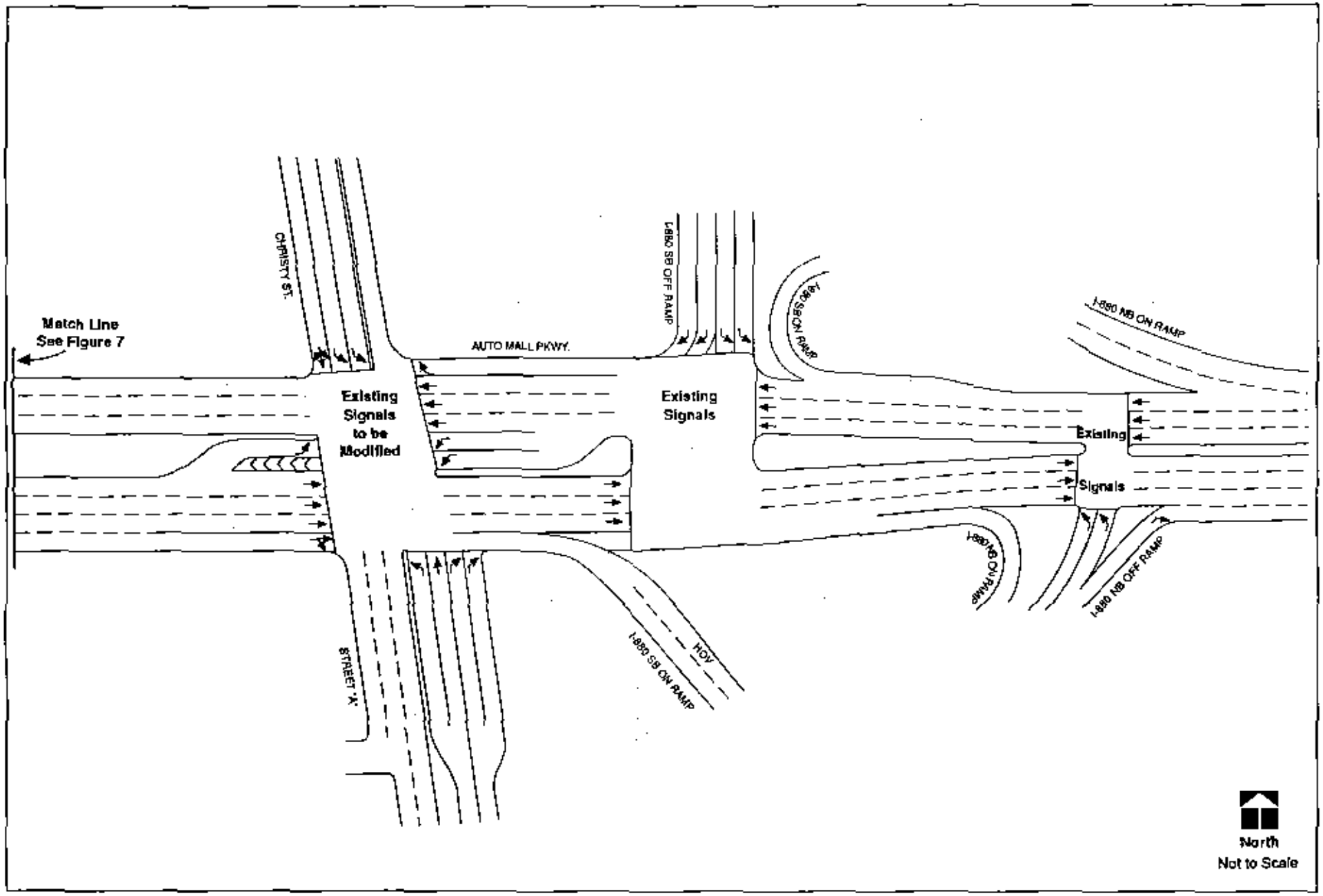

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Auto Mall Parkway Conceptual Lane Requirements - 2020

Figure
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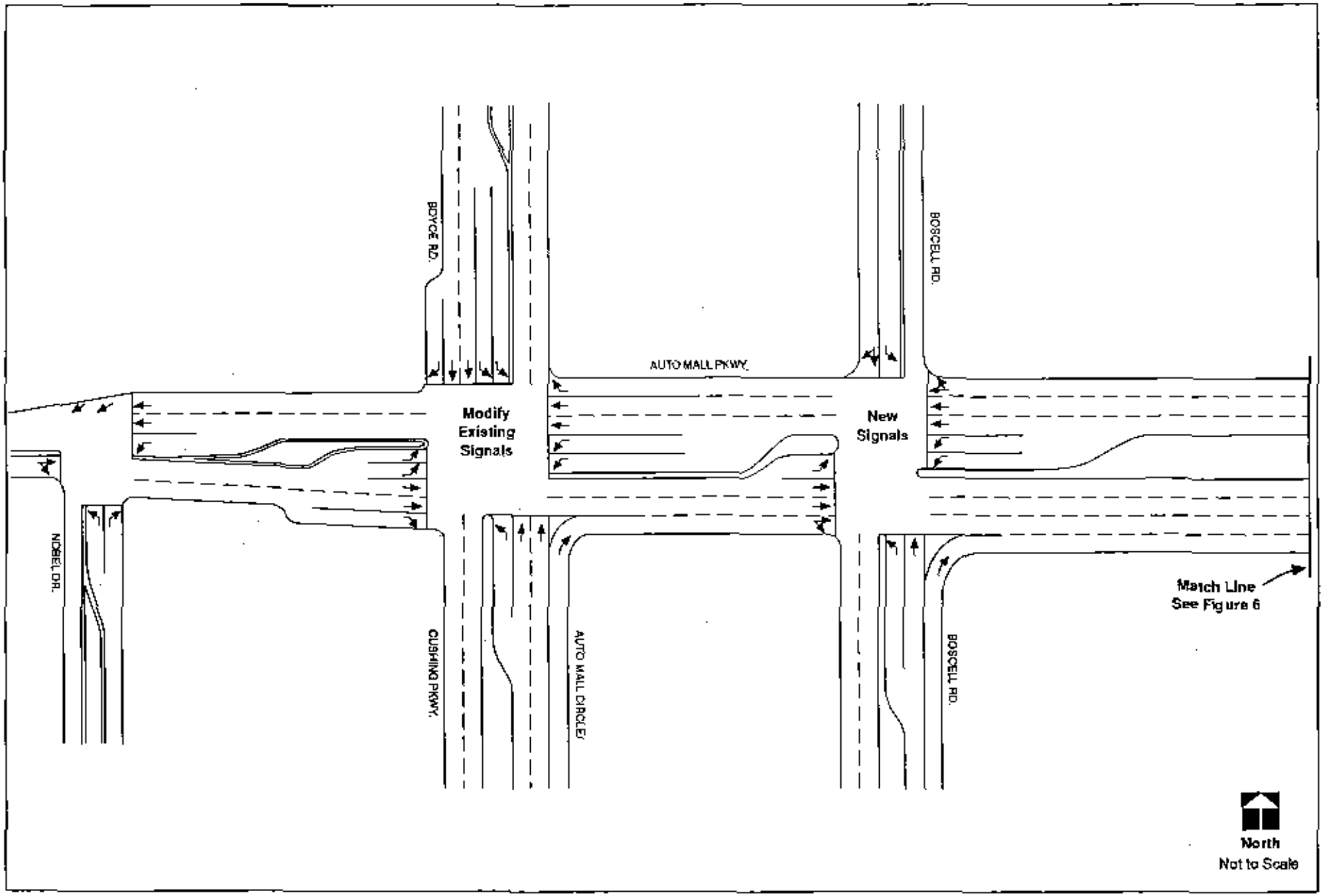

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Auto Mall Parkway Conceptual Lane Requirements - 2020

Figure
7

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STUDY REFERENCES

TJKM Personnel

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APPENDIX A – TDM PROGRAM FOR CATELLUS DEVELOPMENT COMPANY

TDM Program
For
Catellus Development Company

In the City of Fremont

March 29, 1999

TRANSPORTATION DEMAND MANAGEMENT PROGRAM

Introduction

The following plan has been developed as an adjunct to the Pacific Commons Environmental Impact Report. Pacific Commons is a major development in Fremont consisting of industrial and commercial uses. The purpose of this document is to fulfill a requirement set forth by the City of Fremont, which states that "the applicant shall establish a Transportation Management Association for the project area (which may be the Business Park Owners Association established pursuant to the CC&Rs for the project) and develop a Transportation Demand Management (TDM) program subject to approval by the Development and Environmental Services Director..." The applicant has agreed to this condition as a means of alleviating anticipated traffic impacts of the project. This TDM plan will inform employers and employees of Pacific Commons of transportation options for their daily commute.

TDM strategies are designed to obtain the maximum use of the transportation resources available. The City of Fremont requires the inclusion of measures that would enable and encourage a reduction in project-related automobile trips. The emphasis is on helping to reduce congestion at the most critical times of the day by shifting auto trips away from these peak periods. But this may not reduce the total number of daily trips. Some TDM measures may encourage total daily trip reduction and to the extent of this reduction, TDM measures also benefit air quality. The range of TDM measures evaluated to be most suited to the Pacific Commons project includes land use planning, ridesharing, transit, telecommuting, and pedestrian and bicycle use.

The goal of the Pacific Commons TDM program is to reduce project-related automobile trips. This will be accomplished by implementing measures for alternative transportation modes defined in this report. Every business located within Pacific Commons, regardless of its size, shall include reference to and mandatory participation in the requirements of the TDM program in every lease that is entered into. The Pacific Commons TDM program will include monitoring of the individual plans, and an annual report will be submitted to the City of Fremont. In addition, each company employing 50 or more persons will be required to submit an individual TDM program (sample in Appendix A). This TDM program shall be implemented within six months of moving to Pacific Commons.

Prior to the implementation of a TDM plan, an assessment of where employees live, which mode of travel they use to commute and attitudes regarding future commuting alternatives will provide the basis for effective trip reduction strategies. This will be the first step in establishing the Pacific Commons TDM plan. A sample of such a survey is included in Appendix B.

Ultimately, the success of the Pacific Commons TDM plan will depend on the cooperation of future Pacific Commons employers and employees, the City of Fremont and transportation agencies serving the area.

Project Description

Pacific Commons is a proposed development of approximately 877 acres of land located in Fremont, California. The project site will be developed largely in industrial uses (including warehousing and campus-style Research and Development) and commercial uses, although some portions of the project site will support institutional open space uses (commercial recreation, parks and wetlands) and

public facility uses (a fire station). The construction of this project will have significant impacts on the City of Fremont's transportation facilities.

Once the development is constructed, the formation of the Pacific Commons Owners Association (PCOA) will occur. The PCOA will consist of all property managers (landowners) who will be responsible for developing and maintaining the interests of Pacific Commons landowners, business owners, and employees through various programs, including the TDM program. Association services will be financed through annual assessments levied on an acreage basis to owners each month.

Pacific Commons TDM Program Coordination

In order to successfully implement this program, a coordinator is necessary to oversee all aspects of the program. Once established, the PCOA will hire a full time program coordinator to oversee the program's implementation and monitoring procedures.

One of the main duties of the program coordinator will be to keep all employers and employees informed of their transportation options. In order to achieve this goal and to reward participants of the program, the program coordinator will be responsible for duties described below.

- **Provide ongoing support-** Provide support to all tenants of Pacific Commons with regards to exploring commute alternatives.

- **Work with the City of Fremont-** Serve as a liaison between Pacific Commons and the City of Fremont and make known to the City the transportation needs of Pacific Commons as the needs relate to commuting.

- **Assist employers with TDM programs-** Work with employers within the park to develop individual TDM programs and incentive programs, if help is requested. Contribute where possible to individual company incentive programs.

- **Develop PCOA/TDM marketing program-** Create a marketing program that will increase the effectiveness of the TDM program. Marketing program will include some of the following marketing tools: bulletin board displays, regular mail (voice, electronic, paper) to employers, an internet website, telephone hotlines, an on-site commute information center within the PCOA office, periodic transportation fairs or information regarding them, special events, prizes, games, contests, new employee orientation, meetings with employers, etc.

- **Assist with individual marketing programs-** Provide support to all employers within the park. Work with the employers as a supplement to individual marketing programs, and be available to provide resources and information to individual company TDM program coordinators.

- **Implement incentive program-** Design and implement an effective incentive program to reward the commute alternatives of park tenants. Incentive program will recognize individuals as well as companies.

Monitoring

In order to determine if goals are being met after TDM measures are implemented, the following monitoring programs should be implemented. The results of the monitoring programs will assist in determining which alternate modes of travel, other than drive alone commuting, will best service employees.

- **Monitor ridesharing-** Develop a program to annually survey the employees within Pacific Commons regarding their current residence, commute mode and willingness to rideshare. Make available RIDES match list services on a continued basis.

- **Monitor transit demand-** In coordination with transit agencies, establish "trigger points" to define the thresholds at which it will be appropriate to consider establishment of shuttle services or extension of AC Transit service into the site (as is detailed later in this report). Coordinate with City. All trigger points and service implementation will be subject to approval by the City of Fremont.

- **Monitor overall TDM plan-** Establish a database for all businesses in the development to include general information such as number of employees, type of business, size of business, etc. Track individual TDM programs via monitoring form (see Appendix A for sample) and provide assistance where necessary. Coordinate with all employers within Pacific Common to annually review, monitor and report the results of the TDM plan. Submit annual report of the plan's results to the City of Fremont for review.

- **Monitor vehicle trip generation-** Parking counts and vehicular trip counts at key locations should be conducted annually by the City or an outside consulting firm to determine the overall trip generation, levels of service, and parking utilization. A yearly report should be submitted to the City for review. The PCOA must apply to the City for a special study to cover the cost of City review.

Traffic Demand Management

Trip reduction is not achieved through a simple, one-step process. On the traveler's side, there are many factors contributing to making trip reduction an intricate job, of which two are described:

- The schedule complexity of today's workforce (both spouses working, single parents).

- The convenience and relatively low cost of driving alone, especially considering the ever increasing average travel distances.

Any single trip reduction program can reach only small portions of the entire market, and have a limited effect. Trip reduction can only be measured through a series of cumulative, diversified and constantly monitored trip reduction plans.

Of the many TDM and trip reduction measures known to have worked, the following major ones are presented as most applicable to Pacific Commons. Because Pacific Commons is a new development, coordination is necessary with many agencies for establishing access to Pacific Commons from existing transportation facilities. For each of the following transportation modes, a description of the

current services available is summarized, followed by specific recommendations for implementing service to the Pacific Commons development.

Transportation Modes

Transit

BART (Bay Area Rapid Transit) connects Fremont to the greater Bay Area by commuter train. The southernmost station for BART is located in central Fremont at 2000 BART Way, which is off of Civic Center Drive between Stevenson Boulevard and Mowry Avenue. This public transportation system effectively connects such major cities as San Francisco, Berkeley, Oakland, Richmond, Daly City and Fremont with one another and many other communities. Currently there is no shuttle service between the BART station and Pacific Commons.

AC Transit (Alameda/Contra Costa Transit District) provides the local intra- and intercity bus service, including the Dumbarton Bridge Commuter Service to San Mateo County. The Transportation Agency of Santa Clara County also connects the Fremont BART station with Santa Clara County. The Pacific Commons site is not currently served by public transit, but the forecasted employee transit demand may change this. Because AC Transit is reducing its service systemwide at this time, it is not likely that transit services will be provided to Pacific Commons without some outside assistance.

Both the Southern Pacific and Union Pacific Railroads provide freight service to the Fremont area. The "Capitol Corridor" train links Fremont to San Jose and Sacramento. Amtrak has a passenger rail service stop in Fremont which links the city to Sacramento, San Jose and the rest of the Amtrak service route. The Altamont Express Commuter Rail Service, which opened in 1998, provides transportation for Central Valley residents (Stockton/Manteca/Tracy) to the Santa Clara Valley. Utilizing existing rail tracks, it services Bay Area commuters who come from the north and east into Fremont and communities beyond. The City of Fremont will have one stop at the Centerville Station near I-880.

Park and Ride lots were created as a place to meet a bus, train, carpool or vanpool without having to pay for parking. Park and Ride lots in Fremont are located at the following places: Cabrillo Shopping center on Thornton Avenue, Mission San Jose Community Park on Mission Boulevard, Route 238/I-680, and Route 84 at Ardenwood Boulevard (bicycle lots are only available at the Route 84 lot).

Transit TDM Measures:

- **Explore the possibility of establishing a shuttle service from the Fremont BART station-** PCOA will work with BART to possibly implement a shuttle service between the BART station and Pacific Commons. BART: (510) 464-6000.

- **Explore the possibility of establishing AC Transit bus service to the project site-** PCOA will work with AC Transit to possibly implement bus service to the project site. Bus service should be provided on 30- minute headways or on headways consistent with CMP transit performance standards and AC Transit service standards. AC Transit: Research and Planning Department, 1600 Franklin Street, Oakland, CA 94612. (510) 891-4700.

- **Explore the possibility of establishing an Altamont Commuter Express (ACE) train station near, or shuttle service from the Centerville Station to the project site-** PCOA will contact the ACE Rail Service and the City to determine the feasibility of establishing a train station near Pacific Commons. If a train station is not feasible, PCOA will work with ACE and AC Transit to possibly implement a shuttle service from the Centerville Station to the project site. Altamont Express: (209) 468-3025. AC Transit: (510) 891-4700

(For the above three TSM measures, PCOA will work with the transit agencies to establish "trigger point" guidelines that will determine the criteria for when and if these services will be implemented. The City of Fremont will first approve all trigger points and service implementation).

- **Provide transit user subsidies-** PCOA will subsidize some portion of BART, AC Transit and ACE tickets and passes and will make them available to all park employees, or PCOA will underwrite the cost of providing transit service to the site. "Commuter Check" is a voucher program that provides an easy means for employers to subsidize employee purchase of transit passes. Employers can claim a tax deduction for the subsidy. Commuter Check is easy to administer and will result in an immediate and direct increase in transit usage among employees. PCOA will contact RIDES for more information on Commuter Check. RIDES: (800) 755 POOL.

- **Provide on-site ticket sales-** PCOA will have available in their offices transit information and will provide on-site ticket sales. PCOA will contact Regional Transit Connection (RTC) to implement services for selling tickets and passes. RTC will provide PCOA with tickets to sell to employees for several transit agencies, and they can deliver tickets to Pacific Commons. RTC: (415) 323-8338.

- **Provide Park and Ride lot maps and information-** PCOA will have available maps and information on the locations of all Park and Ride lots in the Bay Area. PCOA will contact RIDES to obtain this information. RIDES: (800) 755-POOL

Ridesharing

Ridesharing involves the sharing of one vehicle by a number of commuters. Carpools (two to six people commuting together) and Vanpools (seven or more people commuting together) are the most effective ways to reduce the number of daily vehicle trips. The benefits of ridesharing could be promoted in terms of cost savings, reduced stress (from driving) and environmental consciousness.

Carpools are more effective when the commute is more than 10 miles and the workers live near each other. It should be noted that carpooling need not be a daily affair to produce significant reductions in auto trips. Two workers who carpool only once a week still reduce their contribution to drive alone auto trips by 10 percent. Vanpools are most effective when commutes are 15 miles or more.

To begin a ridesharing program, there must be a way to match potential carpoolers, vanpoolers or even buspoolers. RIDES for Bay Area Commuters assists those working in Bay Area cities, including Fremont, with individual carpool and/or vanpool options. RIDES was created in 1977 and is a private, nonprofit corporation that promotes alternatives to driving alone in the Bay Area. Funding is provided by Caltrans, the Federal Highway Administration and the Metropolitan Transportation Commission. RIDES has assisted more than 330,000 commuters who want to carpool

or vanpool through a process called "ridematching." Ridematching requests can be made by telephone, fax and by employer-sponsored commuter fairs or seminars. Participants begin the program by filling out a commuter survey, available by calling RIDES.

Employers throughout the region can tap into RIDES' database through its "RIDES On-line" service. Employee transportation coordinators are trained to match their employees using RIDES' database and can find potential car-and vanpoolers for each employee within minutes of logging on to the ridematching system.

RIDES is also well prepared to provide commuters with "emergency" ridematching in the event of a transit strike or natural disaster. RIDES' computer system enables all staff members to access the ridematching database from personal computers on their desks, and all staff are trained in ridematching procedures.

The results of a ridesharing program should be monitored. Pacific Commons employers and employees should be surveyed every year regarding current place of residence, present commute mode and willingness to consider an alternative commute. RIDES applications should be made available at this time for those employees willing to carpool or vanpool.

In addition to the survey effort, all new employees should be informed about the ridesharing campaign and regularly scheduled alternative commute promotions should be held.

Ridesharing TDM Measures:

- **Assist with carpool/ vanpool matching-** PCOA will obtain training from RIDES on how to assemble carpools for employees in the park. PCOA will also provide carpool/vanpool information to all tenants of Pacific Commons. RIDES: (800) 755 POOL.

- **Implement ridesharing program monitoring-** PCOA will create a program to monitor ridesharing which includes annual surveys.

- **Implement Guaranteed Ride Home program-** PCOA will create a program that will guarantee transportation for ridesharers in emergency situations via taxi, company car, other employee, or rental car. This will guarantee that a person who uses a commute alternative will be able to get a ride home in case of personal or family illness, overtime or other emergency. The PCOA TDM program coordinator will be available to coordinate rides in an emergency situation.

- **Provide preferential parking for ridesharers-** PCOA will work with building managers to ensure that preferential parking is reserved for carpools and vanpools at desirable locations. If a building requires a parking fee, PCOA will work with a building manager to lower the cost or offer parking for free.

Bicycle/Pedestrian Commuting

Employees who live within five miles of a BART station or the work site are the most likely to consider bicycling or walking to work, though some avid cyclists and fitness enthusiasts will cycle further. Secure bicycle parking is essential to promote bicycle commuting.

Bicycle/Pedestrian TDM Measures:

- **Provide a secure place to store bikes during a work day-** PCOA will work with employers and building owners to ensure that facilities will be available to store bikes during the work day. These facilities will include one or more of the following: racks, lockers, enclosed and covered parking areas, and bicycle access to a building's interior.

- **Provide showers and clothes lockers-** PCOA will work with employers and building owners to ensure that showers and clothes lockers will be available to those that bicycle or walk to work.

- **Provide support for bicyclists and walkers-** PCOA will make available the following: maps with routes, lanes and paths, information on safe walking routes, on-site bicycle registration, tools and air pumps for on-site emergency bicycle repairs, etc.

Flex-time Scheduling and Telecommuting

Two alternatives to reducing congestion include flex-time scheduling and telecommuting. An employer can offer an employee various options to a 40-hour week, including flextime, staggered work hours, four 10-hour workdays, 5-4-9 work weeks, and regular work hours outside the peak hours. While flextime scheduling will not reduce the number of trips, it will decrease the number of vehicle trips during commute hours. Telecommuting includes utilizing the telephone, fax and modem while working at home.

Flex-time Scheduling and Telecommuting TDM Measures:

- **Provide support and information-** PCOA will have available information for employers and employees on how to implement flex schedules and how to effectively implement a telecommuting program or policy.

Conclusion

There is much variability, and an inevitable level of uncertainty regarding trip reduction success, especially when the project is not yet built.

Trip reductions can be significant when there is serious and ongoing commitment by management to make its TDM measures effective, and when local jurisdictions and transportation agencies provide necessary services and support. Given such commitment and support, it appears very plausible for the Pacific Commons TDM plan to significantly reduce the number of vehicles used for commuting, and thereby contribute to local and regional transportation and air quality goals.

Resources

The following documents were used in the preparation of this TDM program and are available to the general public for use in TDM planning.

City of Pleasanton TSM Program Plan, 1993, 1994, 1995; City of Pleasanton.

City of Santa Rosa Trip Reduction Program; City of Santa Rosa.

Hacienda Transportation Program; Hacienda Owners Association.

Guide to Employer Trip Reduction Programs, November, 1993; Bay Area Air Quality Management District.

TSM Made Easy- A Guide for Multi-tenant Managers, July, 1987; Pleasanton Transportation Task Force.

Draft Guide to Employee Trip Reduction Programs, September, 1993; Bay Area Quality Management District.

Employee Transportation Coordinator Handbook- A Guide to Creating Effective Commute Management Programs, 1995; Caltrans.

Variable Work Hours Handbook, 1995; Commuter Transportation Services, Inc.

The Bay Area Commuter's Survival Guide, (pamphlet); Caltrans.

The True Costs of Driving, (pamphlet); Bay Area Quality Management District.

All About BART, (pamphlet) April, 1996; BART.

Commute Alternatives, (pamphlet); RIDES, KPIX, KCBS.

Internet Websites Consulted:

City of Pleasanton.

City of Fremont.

Hacienda Business Park Owners Association.

Other Sources Used:

Draft Supplemental Environmental Impact Report- Pacific Commons Project, May 1, 1996; Duncan & Jones.

Persons Consulted:

James Paxon, General Manager-Hacienda Business Park Owners Association, 925-463-9040, extension 1

APPENDIX A

SAMPLE MONITORING FORMS FOR INDIVIDUAL TDM PLANS

PACIFIC COMMONS
TDM MONITORING FORM

Pacific Commons' transportation demand management program requires every business with 50 or more employees to design, implement and provide the Pacific Commons Owners Association (PCOA) with an annual Transportation Demand Management (TDM) program.

At the end of the program year, each business shall submit a new TDM plan which describes 1) the program activities during the one-year reporting period; and 2) the information program it intends to implement during the ensuing year.

Besides the TDM plan, every business with 50 or more employees shall have a coordinator who shall be responsible for primary implementation of the TDM plan. The coordinator shall also serve as the liaison to the PCOA TDM program coordinator.

Every business located within Pacific Commons shall include reference to and mandatory participation in the requirements of the TDM program in every lease entered into.

Please complete all sections. Maintain a copy for your records and send the originals to:
Pacific Commons Owners Association
TDM Program Coordinator
Street Address
Fremont, CA

Name of Business: _____

Address of Business: _____

_____

Phone Number: _____ Fax Number: _____

TDM Coordinator Name: _____

Number of Current Employees Located at this Office*: _____

*** If more than 50 employees, please fill out the following questionnaire and return to the PCOA. If less than 50 employees, only complete this page and return to the PCOA.**

PACIFIC COMMONS
EMPLOYER TDM PROGRAM

Please describe your TDM program by answering the following questions.

MARKETING ELEMENT

Criteria for Marketing

a. Promote commute alternatives on a quarterly basis.
b. Make commute alternative information available to new employees
c. Provide transit information (routes and schedules).

1. How often will the TDM coordinator market the TDM program?

Weekly _____ Bi-weekly _____ Monthly _____

Bi-monthly _____ Quarterly _____

2. Which media will you use to market the TDM program?

Company newsletter _____
Hand deliver to each employee _____
Posters _____
Flyers _____
Company meetings _____
Memos/letters _____
Other (please describe) _____

3. Check the transit information that will be available on an ongoing basis:

Transit schedules/route maps _____
Transit brochures _____
Bicycle maps _____
Walking/trail maps _____
Other (please describe) _____

4. Describe commute information available to new employees. _____

_____

_____

5. Do you hold new employee orientations?

Yes _____ No _____

6. Do you distribute commute alternative information to new employees?

Yes _____ No _____

RIDEMATCHING ELEMENT
Criteria for Ridematching

a. Make RIDES ridematching forms available on an ongoing basis.
b. Follow up with ridematching requests, when possible.

7. Check all ridematching services available to your employees:

RIDES basic ridematching request form _____
RIDES "fax-a-Match" forms _____
In-house ridematching assistance _____
Other (please describe) _____

_____

8. How are your employees informed about ridematching services?

Information racks _____
Employee Transportation Coordinator phone number posted/listed _____
New employee orientation _____
Newsletter _____
Posted on bulletin boards _____
Other (please describe) _____

_____

APPENDIX B

SAMPLE INITIAL SURVEY
FOR ALL EMPLOYEES

EMPLOYEE SURVEY

Please answer all questions and return to your company's TDM program coordinator.

Name _____

Home address _____

Home City _____ Zip _____

Employer _____ Current Work Schedule ____ to ____

Employer Street Address _____

Employer City _____ Zip _____

Nearest Cross Street to Home _____

Nearest Cross Street to Work _____

Home Phone _____ Work Phone _____ Ext. _____

How do you get to work now?

- ☐ Drive alone
- ☐ Carpool
- ☐ Vanpool
- ☐ Park and Pool
- ☐ BART
- ☐ Caltrain
- ☐ Light Rail
- ☐ Bus
- ☐ Club Bus
- ☐ Ferry
- ☐ Drive and Transit
- ☐ Motorcycle
- ☐ Bicycle
- ☐ Walk
- ☐ New Commute
- ☐ Other _____

If you currently drive alone, would you be willing to explore alternative modes of transportation for your commute? _____

What commute alternative information would you like to receive? (check as many boxes that apply)

- ☐ None
- ☐ Carpool
- ☐ Vanpool
- ☐ Taking Transit
- ☐ Walking to Work
- ☐ Bicycling to Work
- ☐ Telecommuting
- ☐ Other _____

ELECTIVE TDM MEASURES

PCOA'S TDM program calls for each company to select any reasonable combination of TDM measures designed to provide assistance and incentives to achieve reduced vehicle trips. Please list all measures you intend to implement.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____

17. _____

18. _____

19. _____

20. _____

Please describe additional measures on a separate, attached page.

APPENDIX B – LEVEL OF SERVICE METHODOLOGY

DESCRIPTION OF SIGNALIZED INTERSECTION CAPACITY ANALYSIS TJKM METHODOLOGY

Background

TJKM utilizes a method of intersection capacity analysis known as the Intersection Capacity Utilization (ICU) method. A variation of the TJKM method, known as the critical movement analysis, is described in Interim Materials on Highway Capacity, Transportation Research Circular 212, January 1980, published by the Transportation Research Board of the National Academy of Sciences. The TJKM method is similar to the planning applications method of Signalized Intersection analysis described in Circular 212. This method addresses the capacity of intersections as a whole. It simulates the operation of an actuated signalized intersection.

The method determines the critical movement by approach. The critical movements are determined by identifying the conflicting movements on the north-south and east-west approaches. The critical movement on an approach with split phase operation is the movement with the highest volume-to-capacity ratio since it has no conflicting movements. The method then sums the volume-to-capacity ratio of each critical movement at an intersection to produce an overall intersection volume-to-capacity ratio. When the ratio of volume to capacity reaches unity (1.00), the intersection is "at capacity" and is described as operating at Level of Service E and approaching Level of Service F conditions. If an existing intersection is found to have a volume-to-capacity ratio greater than 1.0, this indicates that the actual lane capacities are greater than those assumed in the methodology.

The advantages of this type of capacity calculation is its direct relationship to actual intersection operations and the ease with which changes in traffic volumes or intersection capacity (i.e. intersection lane configuration) or both can be analyzed. The level of accuracy of this method is comparable to that of the traffic projection processes used to determine future traffic volumes.

Level of Service

The volume-to-capacity ratio is related to the level of service. The relationship of volume-to-capacity ratio to level of service is a scale with a range of LOS A through LOS F. The table "Levels of Service for Intersections" depicts the relationship between the level of service rating and volume-to-capacity ratio.

Input Data

The input data necessary to use this methodology are:

- Lane geometrics
- Turning movement volumes
- Split phasing information

The lane configuration for the study intersections is indicated with a special nomenclature for the TJKM intersection capacity analysis. This nomenclature is explained on the attached "Description of Lane Configuration Format."

Sample

A sample calculation is shown on the accompanying computer print-out "TJKM Intersection Capacity Analysis." This example describes a hypothetical intersection of A Street and B Street, which is regulated by three phase traffic signals. The first signal phase for the northbound movements only has two lanes, both of which are shared with a turn movement. The capacity of these two lanes is 3,000 vehicles per hour. Thus, the critical movement is the combined through plus left plus right-turn movement with a volume of 563. The volume-to-capacity ratio is 0.1877.

Phase 2 is for southbound traffic only and contains three lanes. The per lane volume for the right-turn movement in the right-turn only lane (189 vehicles) is less than that in the two remaining lanes (226 vehicles per lane). Therefore, the length of this signal phase is governed by the traffic in the two left lanes - the shared through and left-turn lane and the left-turn only lane. The capacity of Phase 2 is 2,600 vehicles per hour of green, the volume is 452 vehicles, and the resulting volume-to-capacity ratio is 0.1738.

For Phase 3, the westbound through traffic cannot proceed through the intersection at the same time as the eastbound left-turn movement, even though they may be on the same signal phase, since they are conflicting movements. The same is true for the eastbound through movement and the westbound left-turn movement. In reality, the left-turning vehicles proceed through the gaps in the opposing through traffic as they occur (or in 5, 6, and 8 phase signals have exclusive left-turn signal phasing). In any case, the total east-west capacity requirement is the higher of the sum of the westbound through and/or right turn and the eastbound left turn volume-to-capacity ratios, or the sum of the eastbound through and/or right turn and the westbound left turn volume-to-capacity ratios.

In this case, the critical movement are the westbound shared through and right movement, (combined volume-to-capacity ratio = 0.2187), and the eastbound left-turn movement, (volume-to-capacity ratio = 0.0982).

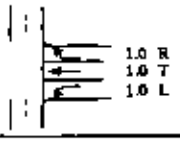
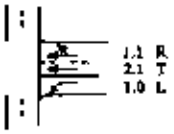
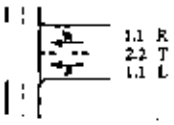
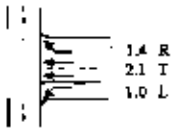
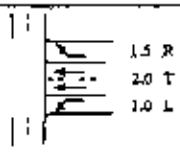
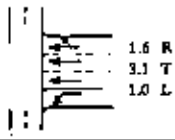
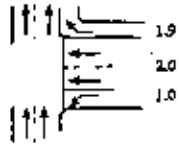
The critical movement volume-to-capacity ratios for each signal phase are summed, then rounded to two decimal places. An allowance for yellow time (assumed to be lost time for vehicle movement) is added to obtain the overall intersection volume-to-capacity rating. The amount of added yellow time depends on the degree to which the intersection is saturated as indicated on the attached "Factors for TJKM Methodology." This table also indicates the assumed lane capacities. In the example, the intersection rating of 0.78 equates to a Level of Service C designation.

DESCRIPTION OF LANE CONFIGURATION FORMAT

The number of lanes and the use of the lanes is denoted with a special nomenclature described below:

Lane Nomenclature

X.Y Where X Denotes the total number of lanes available for a particular movement.
Y Denotes how the lanes are used.

When Y is . . .	. . . The following applies:
0 	A lane used exclusively for a particular movement (i.e. exclusive left-turn lane).
1 	A lane which is shared, that is, either of two different movements can be made from a particular lane (i.e. a lane which is shared by through and right-turn traffic).
2 	Denotes two or more through lanes in which two lanes are shared, one with left-turn traffic, the other with right-turn traffic.
3	Denotes an expressway through movement.
4 	Denotes a right-turn movement from a wide outside lane where right-turn vehicles can bypass through traffic sharing the lane to make a right-turn on red.
5 	Denotes a right-turn movement from an exclusive right-turn lane with a right-turn arrow and prohibition on the conflicting U-turn movement.
6 	Denotes a right-turn movement from a shared lane with a right-turn arrow and prohibition on the conflicting U-turn movement.
7,8,9	Denotes a turning movement which has a separate lane to turn into, as shown below:
7	Turn lane which is shared with a through lane or left-turn lane and under signal control, and which has its own lane to turn into. There must be at least two through lanes.
8	Exclusive turn lane which is under signal control, and which has its own lane to turn into.
9 	Exclusive turn lane not under signal control and which has an exclusive lane to turn into, often referred to as a "free" turn. Since the volumes in this lane do not conflict with other intersection movements, the V/C ratio of the free right-turn movement is not included in the sum of critical V/C ratios.

TJKM INTERSECTION CAPACITY ANALYSIS 5/6/93

INTERSECTION 1 A STREET and B STREET ANYTOWN
COUNT DATE/TIME: 6/5/00 4:00-6:00 PM PEAK HOUR: 4:30-5:30 PM
CONDITION : P.M. PEAK HOUR - EXISTING FILE sample.i

```
                        RIGHT  THRU  LEFT
                          189  225  227                                  ^
                            |    |    |                                  |
                ^           |    |    |          ^                     NORTH
                |         <---   v   --->        |
LEFT   135 ---  1.0   1.0  1.1  2.1   1.1 ---   45  RIGHT
                                                                  STREET NAME:
THRU   623 --> 2.0  (NO. OF LANES)   2.1<---  644  THRU           B STREET

RIGHT   15 ---  1.0   1.1  2.2  1.1   1.0 ---   11  LEFT          SPLIT PHASE?
                |         <---   ^   --->        |                      N
                v           |    |    |          v
                            |    |    |
                           30  518   15
                         LEFT THRU  RIGHT
```

SAMPLE

STREET NAME: A STREET SPLIT PHASE? Y

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	15	15	1500	0.0100	
	THRU (T)	518	518	3000	0.1727	
	LEFT (L)	30	30	1500	0.0200	
	T + R		533	3000	0.1777	
	T + L		548	3000	0.1827	
	T + R + L		563	3000	0.1877	0.1877
SB	RIGHT (R)	189	42 *	1500	0.0280	
	THRU (T)	225	225	1500	0.1500	
	LEFT (L)	227	227	2700	0.0841	
	T + L		452	2700	0.1674	0.1674
EB	RIGHT (R)	15	0 *	1500	0.0000	
	THRU (T)	623	623	3300	0.1888	
	LEFT (L)	135	135	1500	0.0900	0.0900
WB	RIGHT (R)	45	45	1500	0.0300	
	THRU (T)	644	644	3150	0.2044	
	LEFT (L)	11	11	1500	0.0073	
	T + R		689	3150	0.2187	0.2187

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION: 0.66
ADJUSTMENT FOR LOST YELLOW TIME: 0.10

TOTAL VOLUME-TO-CAPACITY RATIO: 0.76
INTERSECTION LEVEL OF SERVICE: C

* ADJUSTED FOR RIGHT TURN ON RED

Developed by TJKM Transportation Consultants, Pleasanton, CA, 1991 YY

Level of Service for Signalized Intersections

Level of Service	Type of Flow	Delay	Maneuverability	V/C Ratio
A	Stable Flow	Very slight or no delay. If signalized, conditions are such that no approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.	Turning movements are easily made, and nearly all drivers find freedom of operation.	0.00-0.60
B	Stable Flow	Slight delay. If signalized, an occasional approach phase is fully utilized.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	0.61-0.70
C	Stable Flow	Acceptable delay. If signalized, a few drivers arriving at the end of a queue may occasionally have to wait through one signal cycle.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	0.71-0.80
D	Approaching Unstable Flow	Tolerable delay. Delays may be substantial during short periods, but excessive back ups do not occur.	Maneuverability is severely limited during short periods due to temporary back ups.	0.81-0.90
E	Unstable Flow	Intolerable delay. Delay may be great—up to several signal cycles.	There are typically long queues of vehicles waiting upstream of the intersection.	0.91-1.00
F	Forced Flow	Excessive delay	Jammed conditions. Back ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	Varies[1]

Notes: 1. In general, volume-to-capacity ratios cannot be greater than 1.00, unless the lane capacity assumptions are too low. Also, if future demand projections are considered for analytical purposes, a ratio greater than 1.00 might be obtained, indicating that the projected demand would exceed the capacity.

References: *Highway Capacity Manual, Special Report No. 209*, Transportation Research Board, 1985.
Highway Capacity Manual, Special Report No. 87, Highway Research Board, 1965.
TJKM.

los_desc.tab

APPENDIX C – LEVEL OF SERVICE WORKSHEETS: 2020 WITH PROJECT

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Condition: FREMONT YEAR 2020 (25K) AM PEAK HOUR 11/29/99

INTERSECTION 17595 I-880 SB OFF/STEVENSON BL. CITY OF FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour AM

```
TJKM METHOD          RIGHT THRU LEFT
-----------            867    0  211
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT      0 ---  0.0   2.0  0.0  2.0   0.0 ---     0  RIGHT
                                                          STREET NAME:
THRU    670 ---> 3.0  (NO. OF LANES)   3.0<--- 1368  THRU  STEVENSON BL.

RIGHT     0 ---  0.0   0.0  0.0  0.0   0.0 ---     0  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                     SIG WARRANTS:
W + E                    0    0    0                       Urb=Y, Rur=Y
  S                    LEFT THRU RIGHT Split? N
```

STREET NAME: I-880 SB OFF

MOVEMENT		ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
SB	RIGHT (R)	867	787 *	3600	0.2186	0.2186
	LEFT (L)	211	211	3600	0.0586	
EB	THRU (T)	670	670	5700	0.1175	
WB	THRU (T)	1368	1368	5700	0.2400	0.2400

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.46
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.56
INTERSECTION LEVEL OF SERVICE:	A

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) PM PEAK HOUR 11/29/99

INTERSECTION 17595 I-880 SB OFF/STEVENSON BL. CITY OF FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour PM

```
TJKM METHOD          RIGHT THRU LEFT
-----------            297    0  822
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT      0 ---  0.0   2.0  0.0  2.0   0.0 ---     0  RIGHT
                                                          STREET NAME:
THRU  2150 ---> 3.0  (NO. OF LANES)   3.0<--- 1237  THRU  STEVENSON BL.

RIGHT     0 ---  0.0   0.0  0.0  0.0   0.0 ---     0  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                     SIG WARRANTS:
W + E                    0    0    0                       Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: I-880 SB OFF

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
SB RIGHT (R)	297	217 *	3600	0.0603	
LEFT (L)	822	822	3600	0.2283	0.2283
EB THRU (T)	2150	2150	5700	0.3772	0.3772
WB THRU (T)	1237	1237	5700	0.2170	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.61
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.71
INTERSECTION LEVEL OF SERVICE:	C

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) AM PEAK HOUR 11/29/99

INTERSECTION 3930 I-880 NB OFF/STEVENSON FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour AM

```
TJKM METHOD          RIGHT THRU LEFT
-----------              0    0    0
                         |    |    |
             ^           |    |    |          ^
             |         <---   v   --->        | Split? N
LEFT     0 ---  0.0   0.0  0.0  0.0   0.0 ---     0  RIGHT
                                                          STREET NAME:
THRU   738 ---> 3.0  (NO. OF LANES)   4.0<--- 2269  THRU  STEVENSON

RIGHT    0 ---  0.0   2.0  0.0  2.0   0.0 ---     0  LEFT
             |         <---   ^   --->        |
             v           |    |    |          v
  N                      |    |    |                     SIG WARRANTS:
W + E                  532    0  394                       Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: I-880 NB OFF

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	394	314 *	3600	0.0872	
LEFT (L)	532	532	3600	0.1478	0.1478
EB THRU (T)	738	738	5700	0.1295	
WB THRU (T)	2269	2269	7600	0.2986	0.2986

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.45
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.55
INTERSECTION LEVEL OF SERVICE:	A

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) PM PEAK HOUR 11/29/99

INTERSECTION 3930 I-880 NB OFF/STEVENSON FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour PM

```
TJKM METHOD          RIGHT THRU LEFT
-----------             0    0    0
                        |    |    |
              ^         |    |    |         ^
              |       <---   v   --->       | Split? N
LEFT     0 ---  0.0   0.0  0.0  0.0   0.0 ---     0  RIGHT
                                                          STREET NAME:
THRU  1999 ---> 3.0  (NO. OF LANES)   4.0<--- 1471  THRU  STEVENSON

RIGHT    0 ---  0.0   2.0  0.0  2.0   0.0 ---     0  LEFT
              |       <---   ^   --->       |
              v         |    |    |         v
  N                     |    |    |                     SIG WARRANTS:
W + E                  472    0  872                       Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: I-880 NB OFF

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	872	792 *	3600	0.2200	0.2200
	LEFT (L)	472	472	3600	0.1311	
EB	THRU (T)	1999	1999	5700	0.3507	0.3507
WB	THRU (T)	1471	1471	7600	0.1936	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.57
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.67
INTERSECTION LEVEL OF SERVICE:	B

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) AM PEAK HOUR 11/29/99

INTERSECTION 17344 BOSCELL/AUTO MALL PW. FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour AM

```
TJKM METHOD          RIGHT THRU LEFT
-----------             8   49   59
                         |    |    |
             ^           |    |    |          ^
             |         <---   v   --->        | Split? N
LEFT     6 ---  1.0   1.4  1.1  1.0   1.4 ---  388  RIGHT
                                                          STREET NAME:
THRU   437 ---> 3.1  (NO. OF LANES)   3.1<--- 1384  THRU  AUTO MALL PW.

RIGHT   26 ---  1.4   1.0  1.0  1.9   2.0 --- 1405  LEFT
             |         <---   ^   --->        |
             v           |    |    |          v
  N                      |    |    |                     SIG WARRANTS:
W + E                   52  110  201                       Urb=B, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: BOSCELL

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	201	201	1800	0.1117	
	THRU (T)	110	110	1900	0.0579	0.0579
	LEFT (L)	52	52	1800	0.0289	
SB	RIGHT (R)	8	0 *	1800	0.0000	
	THRU (T)	49	49	1800	0.0272	
	LEFT (L)	59	59	1800	0.0328	0.0328
	T + R		49	1800	0.0272	
EB	RIGHT (R)	26	0 *	1800	0.0000	
	THRU (T)	437	437	5600	0.0780	0.0780
	LEFT (L)	6	6	1800	0.0033	
	T + R		437	5600	0.0780	
WB	RIGHT (R)	388	298 *	1800	0.1656	
	THRU (T)	1384	1384	5600	0.2471	
	LEFT (L)	1405	1405	3600	0.3903	0.3903
	T + R		1682	5600	0.3004	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.56
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.66
INTERSECTION LEVEL OF SERVICE:	B

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) PM PEAK HOUR 11/29/99

INTERSECTION 17344 BOSCELL/AUTO MALL PW. FREMONT
Count Date FREMONT MODEL Time YEAR2020 (20) Peak Hour PM

```
TJKM METHOD          RIGHT THRU LEFT
-----------            20   82  325
                        |    |    |
             ^          |    |    |          ^
             |        <---   v   --->        | Split? N
LEFT    19 ---  1.0   1.4  1.1  1.0   1.4 ---  126  RIGHT
                                                          STREET NAME:
THRU  1114 ---> 3.1  (NO. OF LANES)   3.1<---  698  THRU  AUTO MALL PW.

RIGHT   73 ---  1.4   1.0  1.0  1.9   2.0 ---  815  LEFT
             |        <---   ^   --->        |
             v          |    |    |          v
  N                     |    |    |                      SIG WARRANTS:
W + E                  36  125  845                        Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: BOSCELL

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	845	845	1800	0.4694	
	THRU (T)	125	125	1900	0.0658	0.0658
	LEFT (L)	36	36	1800	0.0200	
SB	RIGHT (R)	20	0 *	1800	0.0000	
	THRU (T)	82	82	1800	0.0456	
	LEFT (L)	325	325	1800	0.1806	0.1806
	T + R		82	1800	0.0456	
EB	RIGHT (R)	73	0 *	1800	0.0000	
	THRU (T)	1114	1114	5600	0.1989	0.1989
	LEFT (L)	19	19	1800	0.0106	
	T + R		1114	5600	0.1989	
WB	RIGHT (R)	126	36 *	1800	0.0200	
	THRU (T)	698	698	5600	0.1246	
	LEFT (L)	815	815	3600	0.2264	0.2264
	T + R		734	5600	0.1311	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.67
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.77
INTERSECTION LEVEL OF SERVICE:	C

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) AM PEAK HOUR 11/29/99

INTERSECTION 17351 CHRISTY/AUTO MALL FREMONT

Count Date Time Peak Hour

```
TJKM METHOD          RIGHT THRU LEFT
-----------             67   16  259
                         |    |    |
                         |    |    |
                     <---   v   --->      | Split? N
LEFT    41 ---  1.0   1.1  1.1  2.0   1.0 ---  542  RIGHT
                                                     STREET NAME:
THRU   439 ---> 3.1  (NO. OF LANES)   3.0<--- 2777  THRU  AUTO MALL

RIGHT   51 ---  1.1   1.0  1.0  1.9   2.0 --- 1265  LEFT
                     <---   ^    --->      |
                         |    |    |       v
  N                      |    |    |                    SIG WARRANTS:
W + E                    6    4  185                      Urb=Y, Rur=Y
  S                  LEFT THRU RIGHT Split? N
```

STREET NAME: CHRISTY

MOVEMENT		ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	185	185	1800	0.1028	
	THRU (T)	4	4	1900	0.0021	0.0021
	LEFT (L)	6	6	1800	0.0033	
SB	RIGHT (R)	67	67	1800	0.0372	
	THRU (T)	16	16	1800	0.0089	
	LEFT (L)	259	259	3600	0.0719	0.0719
	T + R		83	1800	0.0461	
EB	RIGHT (R)	51	51	1800	0.0283	
	THRU (T)	439	439	5600	0.0784	
	LEFT (L)	41	41	1800	0.0228	0.0228
	T + R		490	5600	0.0875	
WB	RIGHT (R)	542	397 *	1800	0.2206	
	THRU (T)	2777	2777	5700	0.4872	0.4872
	LEFT (L)	1265	1265	3600	0.3514	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.58
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.68
INTERSECTION LEVEL OF SERVICE:	B

* ADJUSTED FOR RIGHT TURN ON RED

INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) PM PEAK HOUR 11/29/99

INTERSECTION 17351 CHRISTY/AUTO MALL FREMONT
Count Date Time Peak Hour

```
TJKM METHOD          RIGHT THRU LEFT
-----------             31   16  148
                         |    |    |
                         |    |    |
                   <---  v    ---->      | Split? N
LEFT    79 ---  1.0   1.1  1.1  2.0   1.0 ---   75  RIGHT
                                                      STREET NAME:
THRU  2810 ---> 3.1  (NO. OF LANES)    3.0<---  905  THRU  AUTO MALL

RIGHT   16 ---  1.1   1.0  1.0  1.9   2.0 ---  604  LEFT
                   <---   ^   --->      |
                   v      |    |        v
  N                       |    |                          SIG WARRANTS:
W + E                    45    9 1315                       Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: CHRISTY

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	1315	1315	1800	0.7306	
	THRU (T)	9	9	1900	0.0047	
	LEFT (L)	45	45	1800	0.0250	0.0250
SB	RIGHT (R)	31	31	1800	0.0172	
	THRU (T)	16	16	1800	0.0089	
	LEFT (L)	148	148	3600	0.0411	
	T + R		47	1800	0.0261	0.0261
EB	RIGHT (R)	16	16	1800	0.0089	
	THRU (T)	2810	2810	5600	0.5018	
	LEFT (L)	79	79	1800	0.0439	
	T + R		2826	5600	0.5046	0.5046
WB	RIGHT (R)	75	0 *	1800	0.0000	
	THRU (T)	905	905	5700	0.1588	
	LEFT (L)	604	604	3600	0.1678	0.1678

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.72
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.82
INTERSECTION LEVEL OF SERVICE:	D

* ADJUSTED FOR RIGHT TURN ON RED

INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) AM PEAK HOUR 11/29/99

INTERSECTION 17618 FREMONT BL.(SO.)/I-880 NB RAMP . FREMONT

Count Date Time Peak Hour

```
TJKM METHOD          RIGHT THRU LEFT
-----------              0 2682    0
                          |   |   |
              ^           |   |   |          ^
              |         <---  v   --->       | Split? N
LEFT      0 ---  0.0   0.0  3.0  0.0   2.0 ---  568  RIGHT
                                                          STREET NAME:
THRU      0 ---> 0.0  (NO. OF LANES)   0.0<---    0  THRU  I-880 NB RAMP

RIGHT     0 ---  0.0   0.0  3.0  0.0   2.0 ---  612  LEFT
              |         <---  ^   --->       |
              v           |   |   |          v
  N                       |   |   |                       SIG WARRANTS:
W + E                     0  375    0                        Urb=Y, Rur=Y
  S                    LEFT THRU RIGHT Split? N
```

STREET NAME: FREMONT BL.(SO.)

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB THRU (T)	375	375	5700	0.0658	
SB THRU (T)	2682	2682	5700	0.4705	0.4705
WB RIGHT (R)	568	488 *	3600	0.1356	
LEFT (L)	612	612	3600	0.1700	0.1700

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.64
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.74
INTERSECTION LEVEL OF SERVICE:	C

* ADJUSTED FOR RIGHT TURN ON RED

INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) PM PEAK HOUR 11/29/99

INTERSECTION 17618 FREMONT BL.(SO.)/I-880 NB RAMP FREMONT

Count Date Time Peak Hour

```
TJKM METHOD          RIGHT THRU LEFT
-----------              0 1254    0
                         |   |   |
              ^          |   |   |          ^
              |        <---  v   --->       | Split? N
LEFT      0 ---  0.0   0.0  3.0  0.0   2.0 ---  685  RIGHT
                                                          STREET NAME:
THRU      0 ---> 0.0  (NO. OF LANES)   0.0<---    0  THRU  I-880 NB RAMP

RIGHT     0 ---  0.0   0.0  3.0  0.0   2.0 ---  368  LEFT
              |        <---  ^   --->       |
              v          |   |   |          v
  N                      |   |   |                        SIG WARRANTS:
W + E                    0 2105    0                          Urb=Y, Rur=Y
  S                    LEFT THRU RIGHT Split? N
```

STREET NAME: FREMONT BL.(SO.)

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB THRU (T)	2105	2105	5700	0.3693	0.3693
SB THRU (T)	1254	1254	5700	0.2200	
WB RIGHT (R)	685	605 *	3600	0.1681	0.1681
LEFT (L)	368	368	3600	0.1022	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.54
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.64
INTERSECTION LEVEL OF SERVICE:	B

* ADJUSTED FOR RIGHT TURN ON RED

INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) AM PEAK HOUR 11/29/99

INTERSECTION 17621 I-880 SB OFF/FREMONT BL (SO.) FREMONT

Count Date Time Peak Hour

```
TJKM METHOD          RIGHT THRU LEFT
-----------            881    0  324
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT      0 ---  0.0   2.0  0.0  2.0   0.0 ---     0  RIGHT
                                                          STREET NAME:
THRU    783 ---> 3.0  (NO. OF LANES)   3.0<--- 1921  THRU  FREMONT BL (SO.)

RIGHT     0 ---  0.0   0.0  0.0  0.0   0.0 ---     0  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                      SIG WARRANTS:
W + E                    0    0    0                        Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: I-880 SB OFF

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
SB	RIGHT (R)	881	801 *	3600	0.2225	0.2225
	LEFT (L)	324	324	3600	0.0900	
EB	THRU (T)	783	783	5700	0.1374	
WB	THRU (T)	1921	1921	5700	0.3370	0.3370

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.56
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.66
INTERSECTION LEVEL OF SERVICE:	B

* ADJUSTED FOR RIGHT TURN ON RED

INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) PM PEAK HOUR 11/29/99

INTERSECTION 17621 I-880 SB OFF/FREMONT BL (SO.) FREMONT

Count Date Time Peak Hour

```
TJKM METHOD          RIGHT THRU LEFT
-----------            405    0  568
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT      0 ---  0.0   2.0  0.0  2.0   0.0 ---     0  RIGHT
                                                          STREET NAME:
THRU   2003 ---> 3.0  (NO. OF LANES)   3.0<---   592  THRU  FREMONT BL (SO.)

RIGHT     0 ---  0.0   0.0  0.0  0.0   0.0 ---     0  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                        SIG WARRANTS:
W + E                    0    0    0                          Urb=Y, Rur=Y
  S                    LEFT THRU RIGHT Split? N
```

STREET NAME: I-880 SB OFF

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
SB RIGHT (R)	405	325 *	3600	0.0903	
LEFT (L)	568	568	3600	0.1578	0.1578
EB THRU (T)	2003	2003	5700	0.3514	0.3514
WB THRU (T)	592	592	5700	0.1039	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.51
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.61
INTERSECTION LEVEL OF SERVICE:	B

* ADJUSTED FOR RIGHT TURN ON RED

INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) AM PEAK HOUR 11/29/99

INTERSECTION 3841 I-880 NB OFFRAMP/AUTO MALL PW. FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour AM

```
TJKM METHOD          RIGHT THRU LEFT
-----------             0    0    0
                        |    |    |
             ^          |    |    |          ^
             |        <---   v   --->        | Split? N
LEFT     0 ---  0.0   0.0  0.0  0.0   0.0 ---     0  RIGHT
                                                          STREET NAME:
THRU  1508 ---> 3.0  (NO. OF LANES)   3.0<--- 2059  THRU  AUTO MALL PW.

RIGHT    0 ---  0.0   2.1  0.0  2.1   0.0 ---     0  LEFT
             |        <---   ^   --->        |
             v          |    |    |          v
  N                     |    |    |                      SIG WARRANTS:
W + E                  859    0  230                        Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: I-880 NB OFFRAMP

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	230	150 *	3600	0.0417	
	LEFT (L)	859	859	3600	0.2386	0.2386
	T + R + L		1009	5400	0.1869	
EB	THRU (T)	1508	1508	5700	0.2646	
WB	THRU (T)	2059	2059	5700	0.3612	0.3612

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.60
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.70
INTERSECTION LEVEL OF SERVICE:	B

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) PM PEAK HOUR 11/29/99

INTERSECTION 3841 I-880 NB OFFRAMP/AUTO MALL PW. FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour PM

```
TJKM METHOD          RIGHT THRU LEFT
-----------              0    0    0
                         |    |    |
             ^           |    |    |          ^
             |         <---   v   --->        | Split? N
LEFT     0 ---  0.0    0.0  0.0  0.0    0.0 ---     0  RIGHT
                                                        STREET NAME:
THRU  2552 ---> 3.0   (NO. OF LANES)    3.0<---  857  THRU  AUTO MALL PW.

RIGHT    0 ---  0.0    2.1  0.0  2.1    0.0 ---     0  LEFT
             |         <---   ^   --->        |
             v                |    |          v
  N                           |    |                       SIG WARRANTS:
W + E                       608    0  879                    Urb=Y, Rur=Y
  S                       LEFT THRU RIGHT Split? N
```

STREET NAME: I-880 NB OFFRAMP

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	879	799 *	3600	0.2219	
LEFT (L)	608	608	3600	0.1689	
T + R + L		1407	5400	0.2606	0.2606
EB THRU (T)	2552	2552	5700	0.4477	0.4477
WB THRU (T)	857	857	5700	0.1504	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.71
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.81
INTERSECTION LEVEL OF SERVICE:	D

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) AM PEAK HOUR 11/29/99

INTERSECTION 17610 I-880 SB OFF/AUTOMALL PW FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour AM

```
TJKM METHOD          RIGHT THRU LEFT
-----------           1542    0 1120
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT      0 ---  0.0   2.0  0.0  2.0   0.0 ---     0  RIGHT
                                                          STREET NAME:
THRU  1243 ---> 3.0  (NO. OF LANES)   3.0<--- 2795  THRU  AUTOMALL PW

RIGHT     0 ---  0.0   0.0  0.0  0.0   0.0 ---     0  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                     SIG WARRANTS:
W + E                    0    0    0                       Urb=Y, Rur=Y
  S                    LEFT THRU RIGHT Split? N
```

STREET NAME: I-880 SB OFF

MOVEMENT		ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
SB	RIGHT (R)	1542	1462 *	3600	0.4061	0.4061
	LEFT (L)	1120	1120	3600	0.3111	
EB	THRU (T)	1243	1243	5700	0.2181	
WB	THRU (T)	2795	2795	5700	0.4904	0.4904

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.90
ADJUSTMENT FOR LOST YELLOW TIME:	0.02
TOTAL VOLUME-TO-CAPACITY RATIO:	0.92
INTERSECTION LEVEL OF SERVICE:	E

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) PM PEAK HOUR 11/29/99

INTERSECTION 17610 I-880 SB OFF/AUTOMALL PW FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour PM

```
TJKM METHOD          RIGHT THRU LEFT
-----------            604    0  943
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT      0 ---  0.0   2.0  0.0  2.0   0.0 ---     0  RIGHT
                                                          STREET NAME:
THRU  3348 ---> 3.0  (NO. OF LANES)   3.0<--- 1543  THRU  AUTOMALL PW

RIGHT     0 ---  0.0   0.0  0.0  0.0   0.0 ---     0  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                     SIG WARRANTS:
W + E                    0    0    0                       Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: I-880 SB OFF

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
SB RIGHT (R)	604	524 *	3600	0.1456	
LEFT (L)	943	943	3600	0.2619	0.2619
EB THRU (T)	3348	3348	5700	0.5874	0.5874
WB THRU (T)	1543	1543	5700	0.2707	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.85
ADJUSTMENT FOR LOST YELLOW TIME:	0.04
TOTAL VOLUME-TO-CAPACITY RATIO:	0.89
INTERSECTION LEVEL OF SERVICE:	D

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) PM PEAK HOUR 11/29/99

INTERSECTION 3881 FREMONT BLVD./SOUTH GRIMMER BL FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour PM

```
TJKM METHOD          RIGHT THRU LEFT
-----------            35  735   31
                        |    |    |
              ^         |    |    |          ^
              |       <---   v   --->        | Split? N
LEFT    96 ---  1.0   1.0  2.0  1.0   1.0 ---   16  RIGHT
                                                        STREET NAME:
THRU   495 ---> 2.0  (NO. OF LANES)   2.0<---  316  THRU  SOUTH GRIMMER BL

RIGHT  697 ---  1.9   2.0  2.0  1.9   1.0 ---  110  LEFT
              |       <---   ^   --->        |
              v         |    |    |          v
  N                     |    |    |                      SIG WARRANTS:
W + E                  435 1437  305                        Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: FREMONT BLVD.

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	305	305	1800	0.1694	
	THRU (T)	1437	1437	3800	0.3782	0.3782
	LEFT (L)	435	435	3600	0.1208	
SB	RIGHT (R)	35	0 *	1800	0.0000	
	THRU (T)	735	735	3800	0.1934	
	LEFT (L)	31	31	1800	0.0172	0.0172
EB	RIGHT (R)	697	697	1800	0.3872	
	THRU (T)	495	495	3800	0.1303	0.1303
	LEFT (L)	96	96	1800	0.0533	
WB	RIGHT (R)	16	0 *	1800	0.0000	
	THRU (T)	316	316	3800	0.0832	
	LEFT (L)	110	110	1800	0.0611	0.0611

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.59
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.69
INTERSECTION LEVEL OF SERVICE:	B

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

LOS Software Licensed to DKS Associates by TJKM

Condition: FREMONT YEAR 2020 (25K) AM PEAK HOUR 11/29/99

INTERSECTION 3881 FREMONT BLVD./SOUTH GRIMMER BL FREMONT
Count Date Time Peak Hour

```
TJKM METHOD          RIGHT THRU LEFT
-----------             66 1842   24
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT    29 ---  1.0   1.0  2.0  1.0   1.0 ---   21  RIGHT
                                                          STREET NAME:
THRU   358 ---> 2.0  (NO. OF LANES)   2.0<---  415  THRU  SOUTH GRIMMER BL

RIGHT 1266 ---  1.9   2.0  2.0  1.9   1.0 ---  142  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                     SIG WARRANTS:
W + E                  243  169   72                       Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: FREMONT BLVD.

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	72	72	1800	0.0400	
	THRU (T)	169	169	3800	0.0445	
	LEFT (L)	243	243	3600	0.0675	0.0675
SB	RIGHT (R)	66	0 *	1800	0.0000	
	THRU (T)	1842	1842	3800	0.4847	0.4847
	LEFT (L)	24	24	1800	0.0133	
EB	RIGHT (R)	1266	1266	1800	0.7033	
	THRU (T)	358	358	3800	0.0942	0.0942
	LEFT (L)	29	29	1800	0.0161	
WB	RIGHT (R)	21	0 *	1800	0.0000	
	THRU (T)	415	415	3800	0.1092	
	LEFT (L)	142	142	1800	0.0789	0.0789

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.73
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.83
INTERSECTION LEVEL OF SERVICE:	D

* ADJUSTED FOR RIGHT TURN ON RED

INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

LOS Software Licensed to DKS Associates by TJKM

Condition: FREMONT YEAR 2020 MODEL (25) PM PEAK HOUR 11/29/99

INTERSECTION 9512 CHERRY/BOYCE/STEVENSON BL. FREMONT
Count Date FROM MODEL Time FROM MODEL Peak Hour FROM MODEL

```
TJKM METHOD          RIGHT THRU LEFT
-----------             65  825  140
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT    67 ---  1.0   1.4  2.1  2.0   1.9 ---   61  RIGHT
                                                          STREET NAME:
THRU   184 ---> 2.0  (NO. OF LANES)   2.0<---   74  THRU  STEVENSON BL.

RIGHT   39 ---  1.0   1.0  2.0  1.0   1.0 ---  386  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                     SIG WARRANTS:
W + E                   21 1266  954                       Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: CHERRY/BOYCE

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	954	681 *	1800	0.3783	0.3783
	THRU (T)	1266	1266	3800	0.3332	
	LEFT (L)	21	21	1800	0.0117	
SB	RIGHT (R)	65	0 *	1800	0.0000	
	THRU (T)	825	825	3700	0.2230	
	LEFT (L)	140	140	3600	0.0389	0.0389
	T + R		825	3700	0.2230	
EB	RIGHT (R)	39	0 *	1800	0.0000	
	THRU (T)	184	184	3800	0.0484	0.0484
	LEFT (L)	67	67	1800	0.0372	
WB	RIGHT (R)	61	61	1800	0.0339	
	THRU (T)	74	74	3800	0.0195	
	LEFT (L)	386	386	1800	0.2144	0.2144

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.68
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.78
INTERSECTION LEVEL OF SERVICE:	C

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

LOS Software Licensed to DKS Associates by TJKM

Condition: FREMONT YEAR 2020 MODEL (25) AM PEAK HOUR 11/29/99

INTERSECTION 9512 CHERRY/BOYCE/STEVENSON BL. FREMONT

Count Date FROM MODEL Time FROM MODEL Peak Hour FROM MODEL

```
TJKM METHOD          RIGHT THRU LEFT
-----------            152 1362   58
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT    27 ---  1.0    1.4  2.1  2.0    1.9 ---   201  RIGHT
                                                          STREET NAME:
THRU    75 ---> 2.0  (NO. OF LANES)    2.0<---   278  THRU  STEVENSON BL.

RIGHT   27 ---  1.0    1.0  2.0  1.0    1.0 ---   748  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                      SIG WARRANTS:
W + E                   13  120   75                        Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: CHERRY/BOYCE

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	75	0 *	1800	0.0000	
	THRU (T)	120	120	3800	0.0316	
	LEFT (L)	13	13	1800	0.0072	0.0072
SB	RIGHT (R)	152	62 *	1800	0.0344	
	THRU (T)	1362	1362	3700	0.3681	
	LEFT (L)	58	58	3600	0.0161	
	T + R		1424	3700	0.3849	0.3849
EB	RIGHT (R)	27	0 *	1800	0.0000	
	THRU (T)	75	75	3800	0.0197	0.0197
	LEFT (L)	27	27	1800	0.0150	
WB	RIGHT (R)	201	201	1800	0.1117	
	THRU (T)	278	278	3800	0.0732	
	LEFT (L)	748	748	1800	0.4156	0.4156

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.83
ADJUSTMENT FOR LOST YELLOW TIME:	0.05
TOTAL VOLUME-TO-CAPACITY RATIO:	0.88
INTERSECTION LEVEL OF SERVICE:	D

* ADJUSTED FOR RIGHT TURN ON RED

INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

LOS Software Licensed to DKS Associates by TJKM

Condition: FREMONT YEAR 2020 (25K) AM PEAK HOUR 12/01/99

INTERSECTION 3860 GRIMMER BL./AUTO MALL PW. FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour AM

```
TJKM METHOD          RIGHT THRU LEFT
-----------            990 1663  135
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT   481 ---  2.0    1.9  3.0  2.0   1.0 ---  215  RIGHT
                                                          STREET NAME:
THRU  1161 ---> 3.0  (NO. OF LANES)   3.0<--- 1896  THRU  AUTO MALL PW.

RIGHT  799 ---  1.0    2.0  2.0  1.9   1.0 ---  311  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                     SIG WARRANTS:
W + E                  596  176   15                       Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: GRIMMER BL.

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	15	15	1800	0.0083	
	THRU (T)	176	176	3800	0.0463	
	LEFT (L)	596	596	3600	0.1656	0.1656
SB	RIGHT (R)	990	990	1800	0.5500	
	THRU (T)	1663	1663	5700	0.2918	0.2918
	LEFT (L)	135	135	3600	0.0375	
EB	RIGHT (R)	799	570 *	1800	0.3167	0.3167
	THRU (T)	1161	1161	5700	0.2037	
	LEFT (L)	481	481	3600	0.1336	
WB	RIGHT (R)	215	101 *	1800	0.0561	
	THRU (T)	1896	1896	5700	0.3326	
	LEFT (L)	311	311	1800	0.1728	0.1728

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.95
ADJUSTMENT FOR LOST YELLOW TIME:	0.00
TOTAL VOLUME-TO-CAPACITY RATIO:	0.95
INTERSECTION LEVEL OF SERVICE:	E

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

LOS Software Licensed to DKS Associates by TJKM

Condition: FREMONT YEAR 2020 (25K) PM PEAK HOUR 12/01/99

INTERSECTION 3860 GRIMMER BL./AUTO MALL PW. FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour PM

```
TJKM METHOD          RIGHT THRU LEFT
-----------           872 1492  296
                        |    |    |
             ^          |    |    |          ^
             |        <---   v   --->        | Split? N
LEFT   878 ---  2.0   1.9  3.0  2.0   1.0 ---  288  RIGHT
                                                          STREET NAME:
THRU  1882 ---> 3.0  (NO. OF LANES)   3.0<--- 1153  THRU  AUTO MALL PW.

RIGHT  894 ---  1.0   2.0  2.0  1.9   1.0 ---   69  LEFT
             |        <---   ^   --->        |
             v          |    |    |          v
  N                     |    |    |                      SIG WARRANTS:
W + E                  894 1069  103                        Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: GRIMMER BL.

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	103	103	1800	0.0572	
	THRU (T)	1069	1069	3800	0.2813	
	LEFT (L)	894	894	3600	0.2483	0.2483
SB	RIGHT (R)	872	872	1800	0.4844	
	THRU (T)	1492	1492	5700	0.2618	0.2618
	LEFT (L)	296	296	3600	0.0822	
EB	RIGHT (R)	894	591 *	1800	0.3283	
	THRU (T)	1882	1882	5700	0.3302	
	LEFT (L)	878	878	3600	0.2439	0.2439
WB	RIGHT (R)	288	134 *	1800	0.0744	
	THRU (T)	1153	1153	5700	0.2023	0.2023
	LEFT (L)	69	69	1800	0.0383	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.96
ADJUSTMENT FOR LOST YELLOW TIME:	0.00
TOTAL VOLUME-TO-CAPACITY RATIO:	0.96
INTERSECTION LEVEL OF SERVICE:	E

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT20K.AMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 MODEL (25) AM PEAK HOUR 11/29/99

INTERSECTION 9511 BOYCE RD./AUTO MALL PW. FREMONT
Count Date FROM MODEL Time FROM MODEL Peak Hour FROM MODEL

```
TJKM METHOD          RIGHT THRU LEFT
-----------            206 1480  328
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT    11 ---  2.0   1.9  2.0  2.0   1.0 ---  568  RIGHT
                                                          STREET NAME:
THRU    45 ---> 3.0  (NO. OF LANES)   3.0<---  423  THRU  AUTO MALL PW.

RIGHT   17 ---  1.0   2.0  2.0  1.9   2.0 ---  367  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                      SIG WARRANTS:
W + E                    3   96   68                        Urb=Y, Rur=Y
  S                    LEFT THRU RIGHT Split? N
```

STREET NAME: BOYCE RD.

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	68	68	1800	0.0378	
	THRU (T)	96	96	3800	0.0253	
	LEFT (L)	3	3	3600	0.0008	0.0008
SB	RIGHT (R)	206	206	1800	0.1144	
	THRU (T)	1480	1480	3800	0.3895	0.3895
	LEFT (L)	328	328	3600	0.0911	
EB	RIGHT (R)	17	0 *	1800	0.0000	
	THRU (T)	45	45	5700	0.0079	
	LEFT (L)	11	11	3600	0.0031	0.0031
WB	RIGHT (R)	568	406 *	1800	0.2256	0.2256
	THRU (T)	423	423	5700	0.0742	
	LEFT (L)	367	367	3600	0.1019	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.62
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.72
INTERSECTION LEVEL OF SERVICE:	C

* ADJUSTED FOR RIGHT TURN ON RED

INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

LOS Software Licensed to DKS Associates by TJKM

Condition: FREMONT YEAR 2020 MODEL (25) PM PEAK HOUR 11/29/99

INTERSECTION 9511 BOYCE RD./AUTO MALL PW. FREMONT
Count Date FROM MODEL Time FROM MODEL Peak Hour FROM MODEL

```
TJKM METHOD          RIGHT THRU LEFT
-----------             69  966  601
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT   289 ---  2.0   1.9  2.0  2.0   1.0 ---  491  RIGHT
                                                          STREET NAME:
THRU   312 ---> 3.0  (NO. OF LANES)   3.0<---  106  THRU  AUTO MALL PW.

RIGHT   51 ---  1.0   2.0  2.0  1.9   2.0 ---  153  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                     SIG WARRANTS:
W + E                   29 1369  424                       Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: BOYCE RD.

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	424	424	1800	0.2356	
	THRU (T)	1369	1369	3800	0.3603	0.3603
	LEFT (L)	29	29	3600	0.0081	
SB	RIGHT (R)	69	69	1800	0.0383	
	THRU (T)	966	966	3800	0.2542	
	LEFT (L)	601	601	3600	0.1669	0.1669
EB	RIGHT (R)	51	0 *	1800	0.0000	
	THRU (T)	312	312	5700	0.0547	
	LEFT (L)	289	289	3600	0.0803	0.0803
WB	RIGHT (R)	491	261 *	1800	0.1450	0.1450
	THRU (T)	106	106	5700	0.0186	
	LEFT (L)	153	153	3600	0.0425	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.75
ADJUSTMENT FOR LOST YELLOW TIME:	0.09
TOTAL VOLUME-TO-CAPACITY RATIO:	0.84
INTERSECTION LEVEL OF SERVICE:	D

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

LOS Software Licensed to DKS Associates by TJKM

Condition: FREMONT YEAR 2020 MODEL (25) AM PEAK HOUR 11/29/99

INTERSECTION 8562 FREMONT BLVD./CUSHING PKWY. FREMONT
Count Date FROM MODEL Time FROM MODEL Peak Hour FROM MODEL

```
TJKM METHOD          RIGHT THRU LEFT
-----------            699 2080    0
                         |   |   |
              ^          |   |   |          ^
              |        <---   v   --->       | Split? N
LEFT     78 ---  2.0   1.9  3.0  0.0   0.0 ---     0  RIGHT
                                                          STREET NAME:
THRU    559 ---> 2.0  (NO. OF LANES)   0.0<---     0  THRU  CUSHING PKWY.

RIGHT   452 ---  1.0   2.0  4.0  1.0   0.0 ---     0  LEFT
              |        <---   ^   --->       |
              v          |   |   |          v
  N                      |   |   |                          SIG WARRANTS:
W + E                  211   76   12                            Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: FREMONT BLVD.

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	12	0 *	1800	0.0000	
	THRU (T)	76	76	7600	0.0100	
	LEFT (L)	211	211	3600	0.0586	0.0586
SB	RIGHT (R)	699	699	1800	0.3883	
	THRU (T)	2080	2080	5700	0.3649	0.3649
EB	RIGHT (R)	452	319 *	1800	0.1772	0.1772
	THRU (T)	559	559	3800	0.1471	
	LEFT (L)	78	78	3600	0.0217	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.60
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.70
INTERSECTION LEVEL OF SERVICE:	B

* ADJUSTED FOR RIGHT TURN ON RED

INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) PM PEAK HOUR 11/29/99

INTERSECTION 8562 FREMONT BLVD./CUSHING PKWY. FREMONT
Count Date FROM MODEL Time FROM MODEL Peak Hour FROM MODEL

```
TJKM METHOD          RIGHT THRU LEFT
-----------            517  484    0
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT   374 ---  2.0   1.9  3.0  0.0   0.0 ---     0  RIGHT
                                                          STREET NAME:
THRU  1067 ---> 2.0  (NO. OF LANES)   0.0<---     0  THRU  CUSHING PKWY.

RIGHT  659 ---  1.0   2.0  4.0  1.0   0.0 ---     0  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                      SIG WARRANTS:
W + E                  734 1758   12                        Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: FREMONT BLVD.

MOVEMENT		ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	12	0 *	1800	0.0000	
	THRU (T)	1758	1758	7600	0.2313	
	LEFT (L)	734	734	3600	0.2039	0.2039
SB	RIGHT (R)	517	517	1800	0.2872	
	THRU (T)	484	484	5700	0.0849	0.0849
EB	RIGHT (R)	659	396 *	1800	0.2200	
	THRU (T)	1067	1067	3800	0.2808	0.2808
	LEFT (L)	374	374	3600	0.1039	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.57
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.67
INTERSECTION LEVEL OF SERVICE:	B

* ADJUSTED FOR RIGHT TURN ON RED

INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) AM PEAK HOUR 11/29/99

INTERSECTION 3904 ALBRAE/BALNTN/STEVENSON FREMONT
Count Date FROM MODEL Time FROM MODEL Peak Hour FROM MODEL

```
TJKM METHOD          RIGHT THRU LEFT
-----------             18   22  125
                         |    |    |
             ^           |    |    |          ^
             |         <---   v   --->        | Split? N
LEFT    21 ---  1.0    1.0  1.1  3.1    1.0 ---  366  RIGHT
                                                        STREET NAME:
THRU   962 ---> 4.1  (NO. OF LANES)    2.0<--- 1467  THRU  STEVENSON

RIGHT  122 ---  1.1    1.0  1.0  1.0    2.0 ---  730  LEFT
             |         <---   ^   --->        |
             v           |    |    |          v
  N                      |    |    |                     SIG WARRANTS:
W + E                   36    8  175                       Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? Y
```

STREET NAME: ALBRAE/BALNTN

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	175	0 *	1800	0.0000	
	THRU (T)	8	8	1900	0.0042	
	LEFT (L)	36	36	1800	0.0200	0.0200
SB	RIGHT (R)	18	0 *	1800	0.0000	
	THRU (T)	22	22	1800	0.0122	
	LEFT (L)	125	125	5400	0.0231	
	T + L		147	5400	0.0272	0.0272
EB	RIGHT (R)	122	122	1800	0.0678	
	THRU (T)	962	962	7500	0.1283	
	LEFT (L)	21	21	1800	0.0117	0.0117
	T + R		1084	7500	0.1445	
WB	RIGHT (R)	366	265 *	1800	0.1472	
	THRU (T)	1467	1467	3800	0.3861	0.3861
	LEFT (L)	730	730	3600	0.2028	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.45
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.55
INTERSECTION LEVEL OF SERVICE:	A

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

LOS Software Licensed to DKS Associates by TJKM

Condition: FREMONT YEAR 2020 (25K) PM PEAK HOUR 11/29/99

INTERSECTION 3904 ALBRAE/BALNTN/STEVENSON FREMONT
Count Date FROM MODEL Time FROM MODEL Peak Hour FROM MODEL

```
TJKM METHOD          RIGHT THRU LEFT
-----------             12   18  433
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT      5 ---  1.0   1.0  1.1  3.1   1.0 ---  340  RIGHT
                                                        STREET NAME:
THRU   1593 ---> 4.1  (NO. OF LANES)   2.0<---  905  THRU  STEVENSON

RIGHT    79 ---  1.1   1.0  1.0  1.0   2.0 ---  305  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                      SIG WARRANTS:
W + E                   138   35  688                        Urb=Y, Rur=Y
  S                    LEFT THRU RIGHT Split? Y
```

STREET NAME: ALBRAE/BALNTN

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	688	532 *	1800	0.2956	0.2956
	THRU (T)	35	35	1900	0.0184	
	LEFT (L)	138	138	1800	0.0767	
SB	RIGHT (R)	12	0 *	1800	0.0000	
	THRU (T)	18	18	1800	0.0100	
	LEFT (L)	433	433	5400	0.0802	
	T + L		451	5400	0.0835	0.0835
EB	RIGHT (R)	79	79	1800	0.0439	
	THRU (T)	1593	1593	7500	0.2124	
	LEFT (L)	5	5	1800	0.0028	
	T + R		1672	7500	0.2229	0.2229
WB	RIGHT (R)	340	188 *	1800	0.1044	
	THRU (T)	905	905	3800	0.2382	
	LEFT (L)	305	305	3600	0.0847	0.0847

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.69
ADJUSTMENT FOR LOST YELLOW TIME:	0.10
TOTAL VOLUME-TO-CAPACITY RATIO:	0.79
INTERSECTION LEVEL OF SERVICE:	C

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

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Condition: FREMONT YEAR 2020 (25K) AM PEAK HOUR 11/29/99

INTERSECTION 3862 FREMONT BLVD./AUTO MALL PKWY. FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour AM

```
TJKM METHOD          RIGHT THRU LEFT
-----------            503 1454 1054
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT    63 ---  2.0   1.0  2.0  2.0   1.1 ---  247  RIGHT
                                                          STREET NAME:
THRU   794 ---> 3.0  (NO. OF LANES)   3.1<--- 1859  THRU  AUTO MALL PKWY.

RIGHT  122 ---  1.0   2.0  2.0  1.0   2.0 ---  374  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                     SIG WARRANTS:
W + E                   69  240   95                       Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: FREMONT BLVD.

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	95	0 *	1800	0.0000	
	THRU (T)	240	240	3800	0.0632	
	LEFT (L)	69	69	3600	0.0192	0.0192
SB	RIGHT (R)	503	407 *	1800	0.2261	
	THRU (T)	1454	1454	3800	0.3826	0.3826
	LEFT (L)	1054	1054	3600	0.2928	
EB	RIGHT (R)	122	25 *	1800	0.0139	
	THRU (T)	794	794	5700	0.1393	
	LEFT (L)	63	63	3600	0.0175	0.0175
WB	RIGHT (R)	247	247	1800	0.1372	
	THRU (T)	1859	1859	5600	0.3320	
	LEFT (L)	374	374	3600	0.1039	
	T + R		2106	5600	0.3761	0.3761

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.80
ADJUSTMENT FOR LOST YELLOW TIME:	0.07
TOTAL VOLUME-TO-CAPACITY RATIO:	0.87
INTERSECTION LEVEL OF SERVICE:	D

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP:TAB

LOS Software Licensed to DKS Associates by TJKM

Condition: FREMONT YEAR 2020 (25K) PM PEAK HOUR 11/29/99

INTERSECTION 3862 FREMONT BLVD./AUTO MALL PKWY. FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour PM

```
TJKM METHOD          RIGHT THRU LEFT
-----------            178  401  387
                        |    |    |
              ^         |    |    |          ^
              |       <---   v   --->        | Split? N
LEFT   339 ---  2.0    1.0  2.0  2.0   1.1 ---  624  RIGHT
                                                        STREET NAME:
THRU  1696 ---> 3.0  (NO. OF LANES)   3.1<--- 1058  THRU  AUTO MALL PKWY.

RIGHT   79 ---  1.0    2.0  2.0  1.0   2.0 ---  359  LEFT
              |       <---   ^   --->       |
              v         |    |    |         v
  N                     |    |    |                     SIG WARRANTS:
W + E                  163 1232  511                      Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: FREMONT BLVD.

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	511	341 *	1800	0.1894	
	THRU (T)	1232	1232	3800	0.3242	0.3242
	LEFT (L)	163	163	3600	0.0453	
SB	RIGHT (R)	178	13 *	1800	0.0072	
	THRU (T)	401	401	3800	0.1055	
	LEFT (L)	387	387	3600	0.1075	0.1075
EB	RIGHT (R)	79	0 *	1800	0.0000	
	THRU (T)	1696	1696	5700	0.2975	
	LEFT (L)	339	339	3600	0.0942	0.0942
WB	RIGHT (R)	624	624	1800	0.3467	0.3467
	THRU (T)	1058	1058	5600	0.1889	
	LEFT (L)	359	359	3600	0.0997	
	T + R		1682	5600	0.3004	

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	0.87
ADJUSTMENT FOR LOST YELLOW TIME:	0.03
TOTAL VOLUME-TO-CAPACITY RATIO:	0.90
INTERSECTION LEVEL OF SERVICE:	D

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

LOS Software Licensed to DKS Associates by TJKM

Condition: FREMONT YEAR 2020 (25K) AM PEAK HOUR 11/29/99

INTERSECTION 3885 OSGOOD RD./AUTOMALL PKW. FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour AM

```
TJKM METHOD          RIGHT THRU LEFT
-----------            469  802  528
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT   276 ---  1.0    1.1  3.1  2.0    1.1 ---  262  RIGHT
                                                          STREET NAME:
THRU  1235 ---> 3.1  (NO. OF LANES)    2.1<--- 1807  THRU  AUTOMALL PKW.

RIGHT  457 ---  1.1    1.0  3.0  1.0    2.0 ---  339  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                      SIG WARRANTS:
W + E                  178  242  181                        Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: OSGOOD RD.

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	181	16 *	1800	0.0089	
	THRU (T)	242	242	5700	0.0425	
	LEFT (L)	178	178	1800	0.0989	0.0989
SB	RIGHT (R)	469	469	1800	0.2606	0.2606
	THRU (T)	802	802	5600	0.1432	
	LEFT (L)	528	528	3600	0.1467	
	T + R		1271	5600	0.2270	
EB	RIGHT (R)	457	457	1800	0.2539	
	THRU (T)	1235	1235	5600	0.2205	
	LEFT (L)	276	276	1800	0.1533	0.1533
	T + R		1692	5600	0.3021	
WB	RIGHT (R)	262	262	1800	0.1456	
	THRU (T)	1807	1807	3700	0.4884	
	LEFT (L)	339	339	3600	0.0942	
	T + R		2069	3700	0.5592	0.5592

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	1.07
ADJUSTMENT FOR LOST YELLOW TIME:	0.00
TOTAL VOLUME-TO-CAPACITY RATIO:	1.07
INTERSECTION LEVEL OF SERVICE:	F

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.AMV,CAP=97FLDCAP.TAB

LOS Software Licensed to DKS Associates by TJKM

Condition: FREMONT YEAR 2020 (25K) PM PEAK HOUR 11/29/99

INTERSECTION 3885 OSGOOD RD./AUTOMALL PKW. FREMONT
Count Date FREMONT MODEL Time YEAR2020 (25) Peak Hour PM

```
TJKM METHOD          RIGHT THRU LEFT
-----------            399  374  387
                         |    |    |
              ^          |    |    |          ^
              |        <---   v   --->        | Split? N
LEFT   409 ---  1.0    1.1  3.1  2.0    1.1 ---  200  RIGHT
                                                          STREET NAME:
THRU  2006 ---> 3.1  (NO. OF LANES)    2.1<--- 1179  THRU  AUTOMALL PKW.

RIGHT  137 ---  1.1    1.0  3.0  1.0    2.0 ---  210  LEFT
              |        <---   ^   --->        |
              v          |    |    |          v
  N                      |    |    |                      SIG WARRANTS:
W + E                  347 1102  645                        Urb=Y, Rur=Y
  S                   LEFT THRU RIGHT Split? N
```

STREET NAME: OSGOOD RD.

	MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB	RIGHT (R)	645	513 *	1800	0.2850	
	THRU (T)	1102	1102	5700	0.1933	
	LEFT (L)	347	347	1800	0.1928	0.1928
SB	RIGHT (R)	399	399	1800	0.2217	0.2217
	THRU (T)	374	374	5600	0.0668	
	LEFT (L)	387	387	3600	0.1075	
	T + R		773	5600	0.1380	
EB	RIGHT (R)	137	137	1800	0.0761	
	THRU (T)	2006	2006	5600	0.3582	
	LEFT (L)	409	409	1800	0.2272	0.2272
	T + R		2143	5600	0.3827	
WB	RIGHT (R)	200	200	1800	0.1111	
	THRU (T)	1179	1179	3700	0.3186	
	LEFT (L)	210	210	3600	0.0583	
	T + R		1379	3700	0.3727	0.3727

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:	1.01
ADJUSTMENT FOR LOST YELLOW TIME:	0.00
TOTAL VOLUME-TO-CAPACITY RATIO:	1.01
INTERSECTION LEVEL OF SERVICE:	F

* ADJUSTED FOR RIGHT TURN ON RED
INT=2020C25.INT,VOL=CAT25K.PMV,CAP=97FLDCAP.TAB

APPENDIX D – COMMENTS ON THE NOTICE OF PREPARATION OF A SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT

RECEIVED DEC 2 2 1999

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Executive Director
Dennis R. Fay

December 20, 1999

Mr. Len Banda
Development and Environmental Services Department
City of Fremont
39550 Liberty Street
P.O. Box 5006
Fremont, CA 94537-5006

SUBJECT: Comments on the Notice of Preparation of a Supplemental Environmental Impact Report for the Pacific Commons Project in the City of Fremont

Dear Len:

Thank you for the opportunity to comment on the City of Fremont's Notice of Preparation of a Supplemental Environmental Impact Report (SEIR) for the Pacific Commons Project. The Pacific Commons Project is located on 768 acres bounded by I-880 to the east, Auto Mall Parkway to the north, the existing Cushing Parkway terminus to the south, and the Southern Pacific Railroad right-of-way and the San Francisco Bay National Wildlife Refuge to the west. This SEIR proposed to incorporate and implement mitigation measures and conditions of approval defined in the City-approved 1996 SEIR and Development Agreement. According to the NOP and conversations with City staff, implementation of these measures will result in reduced development compared to the previously approved project and would result in a corresponding reduction in daily and peak hour trips.

Based on this information, we have no comment because the project does not meet the Tier 1 requirements of generating 100 or more p.m. peak hour trips over baseline conditions. It is exempt from the Land Use Analysis Program of the CMP.

Once again, thank you for the opportunity to comment. Please do not hesitate to contact me if you require additional information. I can be reached at 510/836-2560 ext. 13.

Sincerely,

Beth Walukas
Senior Transportation Planner

cc: Jean Hart, Deputy Director
file: CMP - Environmental Review Opinions - Responses - 1999

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APPENDIX D

AIR QUALITY ANALYSIS AND MODELING ASSUMPTIONS

AIR QUALITY ANALYSIS

Setting

Air Pollution Climatology

The Project site is located in the San Francisco Bay Area, a large, shallow air basin ringed by hills, with a number of sheltered valleys around the perimeter. Two primary sea-level gaps in the hills exist: the Golden Gate and the Carquinez Straits. These two gaps are important sources of ventilation for the Bay Area.

Northwest winds and westerly winds are most common in Fremont. Winds from these directions carry pollutants released by motor vehicles and factories from upwind areas, particularly during the summer months. Winds are lightest on the average in fall and winter, and there are generally periods during these seasons when winds are very light, and local pollutants can build up.

Ambient Standards

The federal Clean Air Act of 1967, as amended, established air quality standards for several "criteria" pollutants. These standards are divided into primary standards (designed to protect the public health) and secondary standards (intended to protect the public welfare from effects such as visibility reduction, soiling, nuisance and other forms of damage). The criteria pollutants of concern in evaluating the air quality impacts associated with the proposed Project are ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2) and suspended respirable particulate matter (PM_{10}). Air quality standards for the criteria pollutants lead (Pb) and sulfur dioxide (SO_2) are already being met locally, and these pollutants would not be generated in significant quantities by the proposed Project or Project-related traffic.

In addition, the State of California has adopted its own air quality standards. The state standards, which establish durations of time for specific contaminant levels designed to avoid adverse effects with a margin for safety, are generally more stringent that the corresponding federal standards, as shown in the table below:

Ozone is a considered a secondary pollutant, since it is not emitted directly into the atmosphere, but is produced through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_x), which are "precursor" compounds for ozone. Because ozone precursors are transported and diffused by wind, ozone is regarded as a regional air pollutant. Ozone is the major component in smog, and exposure to ozone can entail adverse health impacts. When ozone concentrations are predicted to reach or exceed 0.1 parts per million, the Bay Area Air Quality Management District (BAAQMD) issues a "Spare the Air" advisory, telling those who would be adversely affected by unhealthful air (particularly those with respiratory or heart problems) to avoid exertion and outdoor activity to the extent possible, and requesting voluntary reductions in the number of vehicle trips within the region.

FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1 Hour	0.12 parts per million	0.09 parts per million
Carbon Monoxide	8 Hour	9.0 parts per million	9.0 parts per million
	1 Hour	35.0 parts per million	20.0 parts per million
Nitrogen Dioxide	Annual	0.053 parts per million	---
	1 Hour	---	0.25 parts per million
Sulfur Dioxide	Annual	80 micrograms per cubic meter	---
	24 Hour	365 micrograms per cubic meter	0.04 parts per million
	1 Hour	---	0.25 parts per million
PM_{10}	Annual	50 micrograms per cubic meter	30 micrograms per cubic meter
	24 Hour	150 micrograms per cubic meter	50 micrograms per cubic meter
Lead	30 Day Average	---	1.5 micrograms per cubic meter
	Calendar Quarter	1.5 micrograms per cubic meter	---

Source: Bay Area Air Quality Management District, BAAQMD CEQA Guidelines: Assessing the Air Quality Impacts of Projects and Plans, April 1996.

Carbon monoxide is an odorless, colorless gas which can be lethal in high concentrations. The primary sources of carbon monoxide are motor vehicles, and concentrations of this gas are greatest in areas near the intersections of roadways which carry high volumes of traffic.

Nitrogen dioxide is produced through the combustion of fuel, and can contribute to the formation of smog. Nitrogen oxide emissions (the primary sources in the local area motor vehicles) can elevate nitrogen dioxide levels, and also affect visibility.

The use of high sulfur fuels in petroleum refining and electricity generation may result in emissions of sulfur dioxide (SO_2). The San Francisco Bay Area Air Basin meets the established Federal and State ambient air quality standards for this ozone precursor.

Particulates which are 10 microns in diameter or less are identified as PM_{10}. If inhaled deeply, these particulates can cause adverse health effects. The greater proportion of suspended particulates originate from road dust, construction activities and farming. Only a small percentage comes from mobile sources. During the winter, woodsmoke from fireplaces can be the source of up to 40 percent of ambient respirable particulate matter.

Lead has been phased out as a gasoline additive in California, and federal and state ambient air quality standards for lead are met within the San Francisco Bay Area Air Basin.

Current Air Quality

Air quality is monitored in Fremont on Chapel Way. The table below shows air quality data for criteria pollutants measured at this site for 1996-1998. All of the federal ambient air quality standards for criteria pollutants were met in Fremont during this period. However, concentrations of ozone and PM_{10} exceeded state standards on some days.

SUMMARY OF AIR QUALITY DATA FOR FREMONT, 1996-1998
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

Pollutant	Standard	Statistic	1996	1997	1998
Ozone	Federal 1 Hour (0.12 PPM)	Days Over Standard Maximum Concentration (PPM)	0	0	0
Ozone	State 1 Hour (0.09 PPM)	Days Over Standard Maximum Concentration (PPM)	2	2	7
Carbon Monoxide	State/Federal 8 Hour (9.0 PPM)	Days Over Standard Maximum Concentration (PPM)	0	0	0
Particulate Matter (PM_{10})	Federal 24 Hour (150 $\mu g/m^3$)	Days Over Standard	0	0	0
Particulate Matter (PM_{10})	State 24 Hour (50 $\mu g/m^3$)	Days Over Standard Annual Geometric Mean ($\mu g/m^3$)	1	1	1

PPM = parts per million $\mu g/m^3$ = Micrograms per cubic meter

Source: Bay Area Air Quality Management District, Summary of Air Pollution in the Bay Area for 1996, 1997 and 1998.

Regional Air Quality Planning

The federal Clean Air Act of 1962 and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designate the areas where the federal or state ambient air quality standards are not met as "non-attainment areas". Because of the differences between the federal and state standards, the designation of non-attainment areas is different under federal and state legislation.

Federal Air Quality Program

Based on five consecutive summers of clean air data, in 1995 the San Francisco Bay Area became the largest metropolitan area in the United States to attain the federal ozone standard. However, in response to exceedances of the ground-level ozone standard in 1995 and 1996, the U.S. Environmental Protection Agency re-designated the San Francisco Bay Area Air Basin to an unclassified/non-attainment area in 1998. The federal ozone standard was violated several times during the summer of 1998, and a series of "Spare the Air" days were declared in response

("Spare the Air" days involve public service announcements intended to discourage unnecessary driving, lawnmowing, outdoor painting, etc.).

The air basin was designated "attainment" for carbon monoxide by the U.S. Environmental Protection Agency in March, 1998, and is an "attainment" area (or is unclassified) for all other federal ambient air quality standards.

State Air Quality Program

Under the California Clean Air Act (CCAA), the Bay Area Air Basin is a non-attainment area for ozone and PM-10 (respirable particulate matter). The state standard for ozone was violated more than a dozen times in the San Francisco Bay Area during the summer of 1998. "Spare the Air" days were declared when the state ozone standard was exceeded. The air basin is an "attainment" area (or is unclassified) for all other state ambient air quality standards.

The CCAA required local air pollution control districts to prepare Air Quality Attainment Plans. These plans must provide for a reduction of district-wide emissions of each non-attainment pollutant or its precursors of five percent per year averaged over consecutive three-year periods or, if not, provide for adoption of "all feasible measures on an expeditious schedule". The CCAA also grants air districts explicit statutory authority to adopt indirect source regulations (related to land uses or facilities that attract or generate motor vehicle trips and thus result in air pollutant emissions [e.g., shopping centers, office buildings and airports]) and transportation control measures, including measures to encourage or require the use of ridesharing, flexible work hours or other measures which reduce the number or length of vehicle trips.

The current Bay Area Clean Air Plan (CAP) was adopted in December, 1997. It proposes the imposition of controls on stationary sources (factories, power plants, industrial sources, etc.) and transportation control measures designed to reduce emissions from motor vehicles. The CAP proposes the adoption of "all feasible measures on an expeditious schedule".

Impacts

Under current CEQA Guidelines, the Project would have a significant environmental impact if it were to result in:

- Any conflict with the applicable air quality plan;
- Any obstruction to the implementation of the applicable air quality plan;
- Any violation of any air quality standard;
- A substantial contribution to an existing or projected air quality violation;

- A cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Exposure of sensitive receptors to substantial pollutant concentrations; or
- Creation of objectionable odors affecting a substantial number of people.

Construction Impacts

The major construction air quality impacts would be due to dust generated by equipment and vehicles. Fugitive dust is emitted both during construction activity and as a result of wind erosion of exposed earth surfaces. Clearing and earthmoving activities comprise the major source of construction dust emissions, but traffic and general disturbance of the soil also generate significant dust emissions.

Construction activities are also a source of organic gas emissions. Solvents in adhesives, non-waterbased paints, thinner, some insulating materials and caulking materials used at the Project site would evaporate into the atmosphere and would participate in the photochemical reaction that creates urban ozone. Asphalt used in paving is also a source of organic gases for a short time after its application.

The effects of construction activities would be increased dustfall, and locally elevated levels of PM_{10} near the construction activity. Depending on the weather, soil conditions, the amount of activity taking place and the nature of dust control efforts, these impacts could affect adjacent properties or uses on previously completed portions of the Project site. Because of this variability, construction-related dust impacts are considered to be a potentially significant temporary adverse impact.

Local Air Quality Effects

Traffic-Related Impacts

On the local scale, the Project would increase traffic on the local street network, increasing carbon monoxide levels along roadways used by Project-related traffic. For the 1996 Supplemental EIR, a CALINE-4 computer simulation model was applied to three intersections near the Project site: Auto Mall/Christy, Auto Mall/Boyce and Cushing/Fremont. These intersections were selected as those most affected by Project-related traffic. The model results were used to predict the maximum 1- and 8-hour concentrations to be expected near these intersections in the year 2000, corresponding to the 1- and 8-hour averaging times specified in the state and federal standards for carbon monoxide. The results of the CALINE-4 modeling at that time indicated that under worst-case assumptions of traffic and meteorology, none of the three intersections evaluated would have violated state or federal standards either under the General Plan roadway network or under the roadway network associated with the proposed Project (see Ref. 10, pages 136 and 137). The traffic analysis conducted for this Supplemental

EIR indicates that the anticipated year 2020 Project-related vehicle-to-capacity ratios during the PM peak hour at the Auto Mall/Boyce intersection would be no worse than the PM peak hour vehicle-to-capacity ratio projected for the year 2000 in the 1996 analysis (V/C = 0.84). During the AM peak hour at this intersection, and at both AM and PM peak hours at the two other intersections evaluated in 1996, projected 2020 Project-related vehicle-to-capacity ratios would be reduced relative to the projected year 2000 values (see Appendix B, Table V). This would indicate that Project-related impacts on carbon monoxide concentrations would continue to be considered to be less than significant for the Project as currently proposed.

Odor Impacts

The proposed Project would not contain any sensitive receptors for odors. Project-related odor impacts would be less than significant.

Regional Impacts

Trips to and from the Project site would result in air pollutant emissions affecting the entire San Francisco Bay air basin. Regional emissions associated with Project-related vehicle use has been calculated using the URBEMIS-7G computer program (see discussion below).

The estimated incremental daily emissions associated with Project-related traffic are shown below, for reactive organic gases and oxides of nitrogen (two precursors of ozone), and for PM_{10}.

ESTIMATED PROJECT-RELATED REGIONAL EMISSIONS IN POUNDS PER DAY
Catellus Pacific Commons GPA/PDA Draft Supplemental EIR
City of Fremont, California

Source	ROG	NOx	PM_{10}
Automobiles	475.43	1,302.17	691.85

ROG = Reactive Organic Gases
NOx = Oxides of Nitrogen
PM_{10} = Particulate Matter, 10 Micron

For the purposes of comparison, using the URBEMIS-5 computer program to calculate regional emissions for the project evaluated in the 1996 Supplemental EIR (which included Industrial Sources that are not currently a component of the Project), total ROG emissions were estimated at 2,688.7 pounds per day, total NOx emissions were estimated at 724.5 pounds per day, and total PM_{10} emissions were estimated at 135.4 pounds per day (see Draft Supplemental EIR on the Pacific Commons Project, Catellus Development Corporation, May 1, 1996, page 138). The URBEMIS-7G program represents an updated version of the URBEMIS program used in 1996 (which, among other features, changes the previously-modeled vehicle mix to reflect the increased use of small trucks, sport utility vehicles and diesel vehicles). Differences in the two URBEMIS programs, and in the character of the development now proposed at the Project site, may account for the variation in the estimated Project-related emissions from the 1996 analysis to

the 2000 analysis. In any event, the two URBEMIS analyses both indicate that development of the Project site as proposed in 1996, and as currently proposed would result in a level of regional emissions for at least one pollutant in excess of 150 pounds per day (the significance threshold established by the Bay Area Air Quality Management District).

Assessment of Regional Impacts

Guidelines for the evaluation of Project impacts issued by the Bay Area Air Quality Management District consider emission increases to be significant if they exceed 150 pounds per day for any regional pollutant (Ref. 1). Estimated Project-related emissions shown above exceed this criterion for three modeled regional pollutants (ROG, NOx and PM_{10}), so the Project would have a significant effect on regional air quality.

The Project's impact on regional emissions, together with that of cumulative development in the South Bay, would contribute to the continuing ozone problem in the region.

Mitigation

Construction Impacts

The implementation of conventional dust suppression measures such as watering exposed soil surfaces, covering stockpiles of debris, the routine sweeping of the construction area and adjacent streets, and the suspension of any dust-generating activities during high winds would reduce the potential impact to a level of less than significant. The Bay Area Air Quality Management District recommends the following Best Management Practices (BMP's) to be implemented for projects of this type:

- All trucks hauling soil, sand and other loose materials shall be covered, or shall be required to maintain at least two feet of freeboard.
- All unpaved construction staging areas shall be either paved, watered three times each day, or be treated through the application of non-toxic soil stabilizers.
- All paved access roads, parking areas and staging areas shall be swept daily with water sweepers.
- If visible soil material is carried onto adjacent public streets, these streets shall be swept daily with water sweepers.
- Exposed stockpiles of dirt, sand, etc. shall be enclosed, covered or watered twice daily, or non-toxic soil binders shall be applied.
- Traffic speeds of construction vehicles on all roads shall be limited to 15 miles per hour.

- Sandbags or other erosion control measures shall be installed to prevent loose sand or soil runoff to public roadways.

- Vegetation in disturbed areas shall be replanted as quickly as possible.

The use of watering alone for dust control is estimated to reduce dust emissions by about 50 percent. The combined effect of the above measures would have a control efficiency of 70 to 80 percent, which would reduce Project impacts to a level of *less than significant*.

The monitoring of construction mitigation measures would be the responsibility of the City of Fremont.

Regional Impacts

As indicated in the 1996 Supplemental EIR, the City of Fremont should require the Project applicant to develop a TDM (Transportation Demand Management) program for the proposed Project. An aggressive TDM program has the potential to reduce daily trips by approximately 10 to 25 percent, and air quality impacts associated with motor vehicle use would be reduced proportionally. When a significant amount of development has been completed at the Project site, the City of Fremont should require annual surveys documenting the effectiveness of the TDM program in reducing single-occupant commuting.

Although implementation of these measures would reduce the regional air quality impacts associated with the proposed Project, these Project-related impacts would remain *significant* and *unavoidable*.

URBEMIS -7G Modeling Assumptions

Estimates of regional emissions generated by Project traffic were made using a program called URBEMIS-7G. URBEMIS-7G is a program which estimates the emissions that result from various land use development projects. Land use projects can include residential uses such as single-family dwelling units, apartments and condominiums, and non-residential uses such as shopping centers, office buildings and industrial parks. URBEMIS-7G contains default values for much of the information needed to calculate emissions. However, project-specific, user-supplied information can also be used when it is available.

Inputs to the URBEMIS-7G program include trip generation rates, vehicle mix, average trip length by trip type and average speed. Trip generation rates for Project land uses were provided by TJKM Transportation Consultants (see Appendix B). Average trip lengths for Fremont and Alameda County were used. Average speed for all types of trips was assumed to be 25 miles per hour.

The URBEMIS-7G runs assumed summertime conditions.